Lumleian Lectures
ON
URIC ACID: ITS PHYSIOLOGY AND ITS RELATION TO RENAL CALCULI AND GRAVEL.

Delivered before the Royal College of Physicians,

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LECTURE III.

MR. PRESIDENT AND GENTLEMEN,—Before proceeding to the more purely therapeutic part of our subject, I must devote a few minutes to the discussion of other classes of food in reference to the uric-acid-secreting function; and, first, with respect to the influence of a nitrogenised, and especially of an animal diet. Observations are not wanting to show the effects of a pure meat diet on the urine. Those of Lehmann are perhaps the most satisfactory. He first determined the daily excretion of the principal constituents of his urine when on an ordinary mixed diet; he then placed himself on a purely animal diet (chiefly eggs) for twelve days; afterwards, for another twelve days, on a purely vegetable diet; and subsequently, for two days, on a purely non-nitrogenised diet, which consisted of fat, milk, sugar, and starch. His conclusions are that the total solids, as well as the urea, are much increased by animal food, while they are considerably decreased by a vegetable diet, and still more so by one which is non-nitrogenised; whereas the uric acid is not nearly so much affected by the nature of the food, provided that it contains nitrogen. Thus the urea, on an animal diet, was to the uric acid 53·198 : 1·478; on a vegetable diet, 22·481 : 1·021; and on a mixed diet, 32·498 : 1·183. He found that after the use of purely animal food the urine of man closely resembles that of the carnivorous mammals, becoming of a light amber-colour, having a strong acid reaction, and containing neither lactic nor hippuric acid. On the other hand, after a course of vegetable food, the urine becomes of a brownish-red tint, is much less acid, often deposits the earthy phosphates, and always contains alkaline lactates with oxalate of calcium; in fact, the urine closely approaches to that of the herbivorous mammal.

As a result of all the experiments made by different observers, both on man and the lower animals, I think we may fairly conclude that meat, taken in such quantities only as are sufficient to keep up the nutrition of the body, has no tendency to increase the excretion of uric acid; that, when the diet is purely animal, but the quantity small, the uric acid, far from being large, becomes exceedingly small in amount, more especially when it is compared with the urea. On the other hand, that the taking of a great quantity of meat—an excess compared with the requirements of the system—tends to increase the uric acid, though, even then, not more than in proportion to the urea.

These different facts can be advantageously applied in practice in the treatment of gravel and calculus. In such cases, there is certainly no reason why a proper quantity of animal food should not be taken; and the knowledge of this is important, seeing that many patients have been lowered in health by being kept on insufficient diet, with the idea that by these means a lessening of the excretion of uric acid would result.

Causes of Gravel and Calculi.—In the course of our experience most of us have noticed that there are certain individuals who are prone, either to pass a urine thick from urates, or containing uric gravel, or to void numerous small calculi. I think we shall find, on inquiry into the history of those liable to pass gravel and calculi, that they frequently inherit gout. In looking over 1900 cases of this disease, which I have had extracted from my books, I find it mentioned that, of this number, comparatively few had passed calculi. If, on the other hand, we examine cases of calculus, we shall find that a much greater percentage of these patients are the children or grandchildren of gouty parents. In the course of my experience, it has frequently occurred to me to see a man suffering from gout, and to find that he has one child who has had attacks of joint-gout, another who is suffering from eczema, and a third who is passing uric gravel or calculi. It is not very uncommon to find articular gout and calculus present in the same person; in fact, we may fairly conclude that those who suffer from an abnormal condition of the uric acid function on the inner side of our imaginary partition, mentioned in the first lecture—that is, in the blood or system at large—are also more prone than others to experience the effects of a morbid state of the same function on the outer side, or in the urinary tract; in other words, gouty subjects, or those who inherit that diathesis, are more liable than others to gravel and calculus.

There are, however, many influences which act strongly in determining the morbid action to the urinary tract—influences which will often cause the occurrence of such troubles in those who do not inherit them. We see, for example, that in England stone is more common in some counties than in others, and at one time of life more than at another. How can we account for this? Anything that checks the cutaneous function, such as the cold east winds of spring, felt so acutely in Suffolk and Norfork, appears to act as an exciting cause, and it is well known that in these counties gravel and calculus are very common. When the action of the skin is checked, there is no increase of urates, but an undue acidity of the urine, which leads to the precipitation of the uric acid. Cold alone is not necessarily a cause, for in Sweden and Norway calculous diseases are very rare. Another cause which, I believe, leads both to an increase of the excreted uric acid and to its deposition in the urinary organs, is portal congestion. Of the exact pathology of this we are at present ignorant, but in the prophylactic treatment of gravel and calculus, it is important to look to this point; and much good is produced by the frequent use of remedies which tend to relieve such a condition. Hence the value of Carlsbad waters and salts, and of the numerous saline purgative waters which, of late years, have been so much employed. It must always be borne in mind that, in this administration in the diluted form, the water itself becomes an important element in their action upon the system.

Fatty and Oleaginous Food.—With regard to the influence of such food on the urinary excretion, the experiments of Dr. Böcker seem to be most trustworthy; and from them it would appear that no influence whatever is exerted on the excretion of water, urea, uric acid, or any other constituent of the urine, by taking from about a quarter of an ounce to three ounces of butter daily.

Effects of Water on Gravel and Calculus.—Many observations have been made on the effect of increasing and diminishing the quantity of water taken with food or when fasting. In the latter case, especially if the water does not pass off by the intestines, it causes the urine to become pale and copious; but, at the same time, the action of the skin is augmented. It has been asserted that the amount of uric acid is lessened, but it is doubtful whether this is really the case; but any increase in the quantity of the urine helps to keep this principle in solution, and may thus mask its presence.

When the quantity of water taken with food is increased, it appears that certain of the urinary principles are augmented in amount, owing probably to the increased metabolism of the tissues; but, at the same time, it is stated that the uric acid is decreased. Further observations are much required before we can come to any accurate conclusions on this point. That the quantity of water passed by the kidneys in a given time has a great influence upon the physical condition of the urine is evident. If, for example, a healthy man during one day passes an ordinary quantity of urine, and during a second day but half the amount, it is probable that, on the latter occasion, the urine will be turbid and thick from the precipitation of urate of sodium, whilst the first day's urine will remain bright and limpid; and yet the daily elimination of uric acid may be the same on both occasions, and it only requires that an equal quantity of water should be added to the concentrated urine to bring it to the same condition as the more limpid specimen. If a patient continues day by day to pass urine so concentrated that it rapidly becomes thick, perhaps even in the bladder itself, a very slight change in the acidity of the fluid will cause uric acid to be set free and crystallisation to take place, and then uric gravel, in the shape of Cayenne pepper deposit, is formed.

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If these changes only ensue after the urine has been passed, of course, it is of no real consequence; but if they take place while the urine is still within the urinary organs, then either free acid or some urate may become deposited and form gravel, or increase the size of any calculus already existing within the urinary passages. The deposition of uric gravel is of very common occurrence in children; and I know, from clinical experience, that this often depends on the deficient amount of water excreted. I will give one instance of this.

A little boy, five and a half years old was passing, from day to day, urine which either contained uric acid crystals or gave rise to a copious red sediment almost immediately after it was voided; his health was otherwise good. I had the urine of the twenty-four hours carefully collected, and found that it amounted to sixteen fluid ounces, with a specific gravity of 1031. On causing the child to take five fluid ounces of water an hour before breakfast, and the same before his late afternoon meal, the quantity of urine was brought up to twenty-four fluid ounces, and the specific gravity reduced to 1017, nor could any uric acid be discovered when the fluid had stood for thirty-eight hours from the time when the last portion was passed. In a few days, the quantity of urine was increased to thirty-seven fluid ounces, and the specific gravity lowered to 1013.

In many cases it is only necessary to give simple water, such as is usually supplied for drinking purposes. The importance of the proper administration of simple water in these cases as a part of the diet is the greater seeing that the plan of treatment can be pursued for an indefinite period; whereas the duration of a course of mineral waters is necessarily limited to a few weeks. I believe that as yet the medical profession have not laid sufficient stress on the proper administration of water in the treatment of gravel and calculous diseases.

Effects of Alkaline Treatment.—In the treatment of uric gravel and calculus the different alkalies and their salts play a most important part. If we give any fixed alkali in the state of a carbonate, it is, we know, absorbed, and passes through the kidneys in an unaltered form—that is, a carbonate, when taken by the mouth, appears as such in the urine, and, therefore, necessarily diminishes the acidity of that fluid, sometimes rendering it neutral or even alkaline, according to the quantity administered; so that if we give, at frequent intervals throughout the day, a quantity of the alkali equal to the neutralisation of about thirty grains of oxalic acid—the average acidity of the day's urine—we shall, as a rule, keep that fluid in a neutral state.

In considering the equivalents of the different alkaline metals whose salts are employed in medicine, we find that the neutralising power for acids of the different bases must vary considerably. The most practical method of estimating this power is to measure the different alkaline metals, in the form of their carbonates, against each other, when we find that seventy-four parts of carbonate of lithium equal eighty-four parts of carbonate of calcium (chalk or its congeners), 106 parts of carbonate of sodium, and as much as 138 parts of carbonate of potassium. It must, however, be remembered that it is not merely the neutralising power for acids of the above compounds that has to be considered in treating of uric acid disorders; we must also look at the character of the salts which result from the combination of the acid with the metal, for some urates are very much more soluble than others.

It is a matter of clinical experience that lead-impregnation powerfully disposes to the production of gout; and I can also assert, as a result of long-continued observation, that iron salts have a considerable tendency to cause a recurrence of an attack when administered, as they often are, with a view to overcoming debility.

The difference of solubility in the alkaline urates forms a subject of great interest, for the value of a solvent may often be expressed correctly as the product of its neutralising power plus the solubility of the resulting salt. Let us take, for example, carbonate of sodium. It has been shown that its neutralising power is large compared with carbonate of potassium, 106 parts of the former doing the work of 138 parts of the latter; but, on looking at the table of solubilities, it is seen that the soda salt has less than half the solubility of the potash salt. The same remark applies to carbonate of magnesium, as, although it possesses great neutralising power, the resulting salt is very little soluble, and the very sparing solubility of the lime salt renders its employment as a solvent of uric acid undesirable.

The other properties of the alkaline salts must also be taken into consideration when they are administered as remedies. On comparing a soda salt with a corresponding potash salt, it is found that the latter is more prone to produce diuresis than the former; at the same time, there is good evidence that the alimentary canal and its appendages, especially the liver, are more influenced by soda than by potash. This is what might naturally be expected, seeing that true bile consists essentially of glycocholate and taurocholate of sodium. Magnesia salts act more or less as purgatives, and lime salts as astringents, but all act as neutralisers of acidity, and to some extent as solvents of uric acid. Gravel and calculi usually consist of free uric acid, and even the least soluble of the urates, omitting lead and iron, are much more soluble than uric acid itself.

There is one alkali—lithia—which will require some few minutes' consideration, and upon which I propose to bring forward several new observations and experiments; but, before proceeding to discuss its value, I may make some remarks on the different salts of the alkalies, some of which are more eligible for exhibition, especially in the treatment of gravel, than the carbonates.

All of us are probably aware that, if an alkaline citrate is given by the stomach, it is changed, either in the blood or kidneys, into the corresponding carbonate. The same is the case when an acetate or tartrate is administered; in fact, most of the vegetable salts are thus decomposed in the system, carbonates appearing in the urine. The establishment of this point is important, inasmuch as we can, by the use of these valuable salts, introduce into the system, through the mouth, salts which have no alkaline action on the stomach and form, often, an important part of vegetable food, and can still produce the remote alkaline influence where it is wanted; in short, we can often give even an acid salt, grateful and useful to the stomach, and yet have the very opposite effect induced upon the urine.

I will now draw your attention to the salts of lithia, which were first introduced as remedies by myself as far back as 1859. If we look to the atomic weight of the metal lithium we find it very low, only 7. The number representing the carbonate of lithium is also small; compared with carbonate of potassium it is as 74 to 138; hence the neutralising power for acids possessed by carbonate of lithium is greater than that of carbonate of potassium in the above proportions. The acid urate of lithium requires only 220 parts of water at the body temperature to dissolve it; the corresponding potash salt requiring 500 parts, and the soda salt as much as 1130 parts, while the magnesia and lime urates take 1600 and 2800 parts respectively; so that, with respect both to neutralising power and solubility the lithia carbonate has a great advantage over the corresponding salts of potash, soda, magnesia, and lime.

In a paper in the Medico-Chirurgical Society's Transactions, vol. xlviii., 1875, on "The Solvent Treatment of Urinary Calculi," Dr. William Roberts, of Manchester, came to the conclusion that potash carbonate dissolves uric acid more rapidly than the soda salt. This he ascertained by placing sections of uric acid calculi in phials, and causing currents of the different solutions, at blood heat, to pass over them at a regulated rate. He also found that the strength of the solution employed was of much importance, the greatest amount of solvent power being exhibited in solutions containing from forty to sixty grains of the alkaline carbonate to the imperial pint (twenty fluid ounces). Below this strength the power of the solutions gradually declined, until, with those which contained less than three grains to the pint, the solvent power scarcely exceeded that of water. On the other hand, if the strength was above sixty grains to the pint, the pieces of the calculus became encrusted with the alkaline bi-urates which were then deposited, and thus the further action of the solution was impeded. This was especially noticeable when the strength of the solutions was much above 100 grains to the pint. Even without the actual experiment with pieces of uric calculi, I think we could predict that potash would prove a more powerful solvent than soda; for we have only to glance at the table to see that urate of potassium requires, at the body temperature, only 500 parts of water to dissolve it, whereas the corresponding soda salt takes as much as 1130 parts. The soda salt certainly has an advantage in its greater neutralising power, but not sufficient to make up for the far less solubility of the resulting urate. In the paper referred to, and in his book on "Urinary and Renal Diseases," Dr. Roberts has the following footnote: "Some experiments were also made with carbonate of lithia, which

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has been vaunted in recent times as a solvent for uric acid. Its power was found much inferior to that of carbonate of potash and soda. Its reputation seems to have been gained through its comparative insolubility. Only weak solutions of it could be employed." I refer to this passage because other authors have evidently been influenced by the statement; for example, Sir Henry Thompson, in his little work on "The Preventive Treatment of Calculus Disease," says: "Dr. Roberts finds carbonate of potash to be the most powerful solvent; better than soda, much better than lithia."

I have recently had a series of experiments made, the results of which are seen in the following table:—

Effects of Solutions of Carbonates of Sodium, Potassium, and Lithium, upon Fragments of Uric Acid Calculi.

Strength: 60 grains to 20 fluid ounces. Temp., 100° F. Time of action, 12 hours.

In nine experiments (three with each carbonate) the solvent powers were as follows:—

With Carbonate of Sodium:
21·2—18·1—15·3 per cent.
Mean = 18·2 per cent.

With Carbonate of Potassium:
28·6—27·6—38·3 per cent.
Mean = 30·5 per cent.

With Carbonate of Lithium:
43·8—58·6—47·7 per cent.
Mean = 50·0 per cent.

In three experiments. Strength of solutions, 50 grains to 20 fluid ounces. Time, 12 hours. Temp., 100° F.

With carbonate of sodium	16·2 per cent.
With carbonate of potassium	23·1 ,,
With carbonate of lithium	37·7 ,,

One experiment, using carbonate of lithium—100 grains to 20 fluid ounces. Solvent power—70·2 per cent.

Two experiments, using carbonate of potassium and lithium, 20 grains to the 20 fluid ounces.

With carbonate of potassium	21·2 per cent.
With carbonate of lithium	33·1 ,,

Two experiments, using carbonate of potassium and lithium, 10 grains to the 20 fluid ounces.

With carbonate of potassium	11·2 per cent.
With carbonate of lithium	17·5 ,,

The substance employed was a large uric acid calculus given to me by my friend Mr. Erichsen. It was first cut, to ascertain its internal structure, and to see if this was pretty uniform throughout; then a portion was broken up, and the fragments washed with distilled water, and carefully dried. About equal weights of the calculus were put into three bottles, and solutions of neutral carbonates of sodium, potassium, and lithium were added to them. The solutions were of the strength of sixty grains to the twenty fluid ounces; the action upon the calculus continued for twelve hours, at the temperature of 100° Fahr., with frequent agitation. Separate quantities of the calculus were taken. One was first treated with the lithia solution, then with those of potash and soda; another was treated first with the potash solution, then with those of soda and lithia; a third with the three solutions in the order, soda, lithia, and potash. The quantity of the solution used in each case was the same. The results of these experiments are very striking. Let us first consider the soda numbers; we find that the percentage of solvent power in the three experiments was 21·2, 18·1, and 15·3, the average being 18·2 per cent. The percentage of the potash numbers was 28·6, 27·6, and 35·3, the average being 30·5 per cent. The corresponding lithia numbers were 43·8, 58·6, and 47·7, the average being 50·0 per cent. We see, then, that in solutions of the strength mentioned the value of the lithia salt over that of potash, and still more over that of soda, is most evident. Other experiments were afterwards made with solutions of different strengths. Thus, in three experiments, the solutions contained fifty grains to the twenty fluid ounces. Time, twelve hours; temperature 100° Fahr.; with frequent agitation. The carbonate of sodium solution dissolved 16·2 per cent., the carbonate of potassium solution dissolved 23·1 per cent., and the carbonate of lithium solution dissolved 37·7 per cent.

In another experiment, the sixty grain lithia solution being used, but the time altered, at first to ten hours at 100° Fahr., then to eight hours at about 60° Fahr., the solvent power was 60·8 per cent.; but when a solution containing one hundred grains to the twenty fluid ounces was employed, the solvent power was as high as 70·2 per cent.

Lastly, it will be observed that, when the comparison of the solvent power was made between the potash and lithia salts, using twenty and afterwards ten grains to the pint—the quantity used by Dr. Roberts in his lithia experiments—the results were in each case more than 50 per cent. in favour of the carbonate of lithium.

It will be seen from these experiments that so far as soda and potash are concerned the results obtained exactly agree with those of Dr. Roberts; they exemplify the greater solvent power of the latter over the former, a result which might have been clearly anticipated, but, on the other hand, they are totally opposed to his conclusions with respect to lithia. How is this to be explained? On looking at the solubility of urate of lithium we find it more than twice that of the potash salt, or as 220 to 500, and we can scarcely believe that in solutions of the two carbonates the uric acid would be found to be most soluble in the one which contained the alkali which gave the more insoluble urate; this would be absurd—in fact, we should anticipate that the lithia solution would prove as superior to the potash as we have already found the potash to be to the soda solution.

We must look for some means of explanation. Dr. Roberts used the expression "only weak solutions of carbonate of lithia *could* be employed," italicising the word "could;" and he appears to have used in his four experiments, two of which are given in the Medico-Chirurgical Society's Transactions, solutions of the strength of ten and twenty grains to the twenty ounces, whereas, in the case of the potash, he found that a sixty grain solution is the most powerful. Now it will be seen in the table that solutions of carbonate of lithium were employed containing sixty and even as much as 100 grains to the imperial pint, and that, in the case of lithia, as the strength was increased the solvent power also was augmented. I should imagine that Dr. Roberts either used an impure carbonate of lithium or assumed that only one grain was soluble in the fluid ounce, as he used only ten and twenty grain solutions; whereas as much as 100 grains can be dissolved, at the temperature of the body, in the imperial pint of water. Impurity of the salt and the use of solutions which were far too weak will at once explain the discrepancies and the cause of the erroneous statements with regard to the solvent power of the lithia salts. The inevitable conclusion, therefore, is this: that lithia salts are far more powerful solvents of uric acid than potash salts, while these latter are more efficacious than those of soda. We have only to take three small phials, filled with a solution of the three carbonates, of the same strength, and to put into each the same quantity of small uric calculi, the amount being such that the lithia will dissolve them. If we carry these in a warm pocket, after a short time it will be seen that all the calculi have disappeared from the lithia solution, while more than half are left undissolved by the potash, and about four-fifths by the soda solution.

I have been informed by some patients that they have been deterred from using lithia salts, although they had found them valuable, by having been told that their employment would prove injurious, owing to their caustic effects upon the renal organs. In answer to this objection I may say that I have found the action of carbonate of lithium to possess less destructive power than the corresponding salts of potash and soda upon animal tissues.

The only effect that I have ever noticed has been that, when the quantity is increased beyond a certain amount, a little tremor of the hands is produced, which passes off at once on the diminution or omission of the dose of the salt. I have known patients, of their own accord, continue the use of lithia salts for more than ten years, with the effect of entirely preventing the recurrence of the symptoms to remove which they were first prescribed, and without the production of any injurious effect. For myself, I have not the least doubt as to the value of lithia salts as therapeutic agents, and am convinced that, by their employment, depositions of uric acid in the renal organs can to a large extent be prevented. Free dilution and administration on a fasting stomach are points of much importance, which should be attended to in the administration of alkaline remedies. I have been much in the habit of using potash with lithia, in the form of the citrate or the carbonate; the former to give neutralising, the latter to increase the solvent power.

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I do not believe in the value of any injections into the bladder in the treatment of vesical calculus; at the very best, the process must be most tedious; and at the present day, when the surgery of the subject has reached to such great perfection, when a calculus can often be removed completely from the bladder in a few minutes without the use of the knife, I cannot but think that the surgeon is better qualified for the treatment of such cases than the physician.

Influence of Hippuric and Benzoic Acids.—Before proceeding further with the treatment of gravel and calculus, I must redeem my promise to explain certain difficulties in the physiology of uric acid which had to be passed over in my first lecture. How is it that the urine of the sucking calf contains a notable quantity of uric acid, seeing that the same animal, when it grows up and takes its ordinary food, excretes urine which is devoid of this principle? Why should the simple alteration of food cause such a result if uric acid is formed in the kidneys themselves? Is not this fact completely opposed to the second view? Before endeavouring to explain these difficulties I thought it desirable to prove the fact, and examined first the urine of two sucking calves. In both I found distinct evidence of the presence of uric acid. At the same time I discovered another previously unknown fact—viz., that the cow's urine also, under certain circumstances, contains uric acid, as when taking turnips, mangold, brewers' grains, and such-like food, with little hay or grass, and that with such a diet there is little hippuric acid in it. In the horse's urine, which was rich in hippuric acid, I found no uric acid. At first sight, it would appear to follow from these various facts that the seat of origin of uric acid is further back than the kidneys, and that these organs merely eliminate it from the circulating fluid; but I have already shown that the kidneys will not act as filterers of uric acid, even when that principle is known to exist in the blood.

Some little time ago I arrived at the idea that if the urine of man could be maintained in a condition resembling that of the herbivorous mammal, uric concretions, uric gravel, and calculus would be unknown. Alkaline remedies, useful though they are, do not effect all that could be desired. They do, indeed, as we have seen, hold the uric acid in solution, but in no degree do they remove it. While following up my idea of assimilating the urine of man to that of the herbivorous mammal, I made several experiments. I took a specimen of healthy human urine, of full specific gravity, and sufficiently rich in urates to give a free deposit of uric acid crystals when acidulated. With this I filled two tubes to about one-fourth of their capacity. To the first of these I added the urine of a horse, so as almost to fill the tube; to the second I added the same quantity of distilled water, in order that the amount of dilution of the human urine should be the same in each tube. After the tubes had been kept for some two or three hours at about 100° F., their contents were examined. A few drops of hydrochloric acid added to the second tube—where water had been used as the diluent—caused a slow crystallisation of uric acid, but the acidification of the first, in which the urine had been diluted with that of the horse, failed to exhibit any precipitation; nor, when it was evaporated to a small bulk, could uric acid be detected either by the murexide or any other test. The experiment was repeated with the substitution of the urine of the lion for that of the horse. This failed to cause the disappearance of the uric acid.

If these observations are correct, we have found not only that the horse's urine is itself free from uric acid, but that it possesses the power of destroying, at least to some extent, the uric acid contained in the urine of man. It struck me that this conclusion was one which might be fraught with weighty consequences, and demanded much further investigation to corroborate it. Such proof is not wanting.

I next took eight very small uric acid calculi, none of them larger than a pin's head, and, by the aid of a solution of carbonate of lithium, dissolved them in a little water. To this solution I added about eight ounces of the urine of the horse. After the mixed fluids had been kept some few hours at the temperature of the body, no uric acid could be detected. This experiment shows that uric acid, in the form of calculi, when first dissolved in an alkaline solution, is destroyed by the influence of some ingredient which is present in the urine of the horse.

After reflecting upon these phenomena, I endeavoured to find out what was the principle contained in these urines of the herbivora which imparted to them this peculiar power; and, seeing that they are rich in hippuric acid—a substance absent from the urine of the carnivora—I instituted a very numerous set of experiments upon the action of this acid on uric acid. First, a strong solution of hippurate of potassium was mixed in equal quantities with a cold solution of the urate of the same metal, and kept for some few hours at the temperature of the body. On subsequent examination for uric acid by the microscopic test, none could be found, nor could any be detected by the murexide test. Another recorded observation is as follows: A cold concentrated solution of urate of ammonia was mixed with a strong solution of hippurate of sodium, made slightly alkaline with the carbonate; after being kept for a few hours at 100° F., no uric acid could be found. As it might be urged that the uric acid, though existing, was masked by the presence of other matters, the following observations were made, and have been frequently repeated. A cold solution of urate of ammonium was added to one of hippurate of sodium, and the solution made slightly alkaline with the carbonate, so as to imitate as nearly as possible the conditions which exist in the urine of the herbivora. On immediately placing a drop on a microscopic slide, and acidulating it with hydrochloric acid, numerous long crystals of hippuric acid were soon formed, and afterwards rhombic crystals of uric acid were seen, these latter being readily distinguished by their characteristic shape, and by their intense polarising power for light. After about half an hour, the solution having been previously warmed up to the temperature of the body, a second drop was examined, and the uric acid crystals were found to be much less numerous, and in another hour or so they were not to be detected at all. The solution was afterwards evaporated, and no evidence of uric acid could be discovered either by the microscope or the murexide test. By this observation the fact that a change slowly takes place in the solution of the mixed salts is demonstrated; and it is also proved that the uric acid is not simply masked by the presence of other salts, for it is readily exhibited when the solutions are first mixed, and only slowly disappears under the influence of time and warmth.

In the earlier experiments which I made, which were qualitative only, it was found essential that the hippuric acid should be in large excess, in order that the results should be conclusive; but I was soon led to make numerous quantitative experiments.

In these observations I have used the urates of ammonium, sodium, potassium, and lithium, and acted upon them with the hippurates of the same bases, and I have uniformly found that when hippurates and urates are together in solution a change ensues, the urate becoming gradually destroyed, and probably a part of the hippurate also. It has required under the conditions which have been present in most of the experiments nearly fifty times as much hippurate as urate for the complete destruction of the urate; but when the dilution was much increased the quantity of hippurate required seemed to be lessened, as little as twenty-five parts of hippurate being sufficient. Possibly, in the animal body the action takes place more rapidly than in the flasks of the laboratory.

Having established the fact that hippuric acid reacts upon uric acid, we can, I think, at once make use of it to explain a difficulty which we left unsolved in our first lecture in relation to the urine of the sucking calf. We have only to take our original assumption that there are cells in the kidneys of all herbivorous mammals capable of forming uric acid; then this principle would be always present in the urine unless it was subsequently removed; and having now shown that hippuric acid has a destructive power over uric acid, it follows that when the urine of a herbivorous mammal contains but little hippuric acid, then uric acid is present. This is the case in the sucking calf. When, however, the young animal ceases to take milk and lives on a diet of grass, clover, and the like, then the urine becomes rich in hippuric acid, and the uric acid disappears, being removed by the destructive influence of the hippuric acid.

The explanation I consider to be satisfactory, though it is one which I could not till recently have imagined to be correct. It is generally supposed that hippuric acid replaces uric acid—that is, is formed in its stead in the system. It does indeed replace it, though not, as is usually thought, by being formed, under certain circumstances, instead of it, but on account of its possessing the power of removing the uric acid after it has been produced in the renal cells. The explanation holds good equally with reference to the occa-

sional presence of uric acid in the urine of the adult herbivorous mammal. Under their ordinary diet a certain amount of uric acid is always formed. Hippuric acid is also present in large quantities, sometimes as much as 1 to 1·5 per cent., in which case no uric acid can be discovered in the urine; but when these animals are made to eat food which fails to yield hippuric acid the uric acid remains intact, and hence it is that from time to time we hear of the presence of this principle in the urine of herbivorous mammals.

Now it follows necessarily that what happens in the case of these lower animals, applies also to man. If the quantity of hippuric acid becomes increased, the uric acid becomes diminished, and we are in a position to explain an observation made by Heller, who, in conjunction with a friend, first ascertained the quantity of uric acid which each excreted daily when under an ordinary diet; they then changed the character of their food—Heller living for a week on wheaten and rye bread—his friend on rye bread only, water being the sole drink of both. The uric acid soon began to diminish and to be replaced by hippuric acid, and, at the end of the week a mere trace of uric acid was found in Heller's urine—none in that of his friend. During the next week, on an ordinary diet, the hippuric acid gradually diminished and the uric acid reappeared in the former quantities. Doubtless the character of the food, in these experiments, had a direct influence on the formation as well as on the destruction of the uric acid, for the amount of the nitrogenised elements of the food must have been small.

We know that glycine or glycocol (gelatine sugar), which enters into the composition of the bile of many animals, is closely connected with hippuric acid, that this latter can be broken up into benzoic acid and glycine, when boiled with caustic alkali, and, in fact, benzoic acid, when absorbed from the stomach, takes up glycine and becomes converted in the system into hippuric acid, and is thus thrown out in the urine. Such being the case, I thought it most desirable to try the influence of this body upon uric acid and to find out whether it plays any part in the change of the uric acid. I made numerous experiments, using glycine in place of hippuric acid, the other conditions remaining the same, and in no instance did I observe any change in the uric acid, even when days or weeks had elapsed. I then had to look to benzoic acid and ascertain whether the change in the uric acid was due to its influence, and for this purpose I completed a set of observations corresponding to those previously made with hippuric acid. The results were as follows:—I found that benzoic acid, in the form of a benzoate, when in contact with a urate in an alkaline solution, caused the same slow change in the uric acid which ensued when a hippurate was employed. This change, however, cannot be well observed under the microscope because the crystallisation of the benzoic acid is so rapid that the presence of uric acid is obscured; but, when the solution is evaporated and the benzoic acid removed by alcohol, the murexide test can be readily employed.

To us, as physicians, several questions naturally suggest themselves. Can we make any practical use of the facts before us? Will the administration of hippurates or benzoates prove of any practical value in the treatment of the different forms of diseases connected with the uric acid diathesis? Can a diet be devised which will assimilate to some extent the urine of man to that of the herbivorous mammal? These are questions of no little importance to us and to humanity at large.

Let us see how far they may be answered. In January, 1842, when a young student, I read a paper before the Chemical Society, which was published in their Transactions and in the *Philosophical Magazine* for that year. It was entitled "On the Conversion of Benzoic Acid into Hippuric Acid in the Animal Economy." In it, I fully confirmed Wöhler's then recent discovery of the conversion of the one acid into the other, but I proved that this change could not be effected by the benzoic acid uniting with the uric acid, as had been suggested; first, because the quantity of the latter was not sufficient; secondly, because the uric acid found in the urine excreted three or four hours after the taking of benzoic acid was not very appreciably diminished. I also suggested in the paper the probable future synthesis of hippuric acid, and that, if benzoic acid be administered beyond a certain amount, the excess will pass into the urine in an unchanged condition. Both these suggestions have since then been realised. Within the last few years I have returned to the consideration of the subject, and have obtained a large amount of clinical experience.

If hippuric and benzoic acids in an alkaline solution possess the power of changing and removing uric acid it is natural to suppose that when the blood is in an abnormal state from its presence the administration of the salts of these acids should prove valuable; for there is no doubt that if hippurate of sodium be added to a blood-serum which shows the presence of a urate the latter is soon removed from it. It is important to ascertain whether they are of value in cases where uric acid is liable to be deposited in any portion of the urinary tract.

In the first place, these salts act advantageously on the mucous membrane of the bladder and its appendages, and in cases where there is a disposition in the urine to become ammoniacal from decomposition they are most useful in checking such tendency. You will, perhaps, remember that in my first lecture I said that I had found the urine of the horse much less liable to decomposition than that of man—a circumstance possibly due in part to its containing hippuric acid. This action on the membrane may influence much the secretion of the colloid matter, and thus prove valuable in cases of gravel and calculus, which are so intimately associated with this colloid; and, lastly, it may have an effect upon the excretion of uric acid, a point which I must now endeavour to ascertain.

I have said that the usual absence of uric acid from the urine of the herbivorous mammal is due, not to its non-formation, in small quantities, in their kidneys, but to the presence of considerable quantities of hippuric acid in the urine; and that, provided that we remove this latter principle by an alteration in the food, assimilating it to that of the young sucking animal which takes milk only; or by giving vegetables which do not yield hippuric acid; that then uric acid appears in their urine. Ought we not, therefore, to conclude that the administration of benzoic or hippuric acid would influence the excretion of uric acid? In the herbivora the urine is always alkaline in reaction; in man it is acid. In my experiments on the destructive influence of hippuric or benzoic acid upon uric acid, I found it important to use solutions made alkaline with a carbonate, thus imitating, as nearly as possible, the condition of herbivorous urines. We do not get this in the case of man. In 1842, when, in a very limited number of experiments, I gave benzoic acid in the free state, I found but little alteration in the excreted uric acid, still it was lessened.

Kerner, who appears to have made a careful set of experiments, came to the conclusion that neither the nitrogenised nor the other principles of the urine were influenced by benzoic acid.

I have recently made some observations on the action of benzoic acid on the urine, with the results which I will give you in a minute. I may tell you that great care must be taken not to form conclusions from one or two experiments, as the excretion of uric acid is always fitful, little circumstances causing it to be greatly diminished for a few hours and then suddenly increased. If the uric acid is directly formed in the renal cells, it is natural to suppose that much of it would escape the action of the hippurates contained in the fluid portion of the urine, and especially if that fluid is in an acid condition; and experiments seem to confirm this idea.

I am still engaged in clinically investigating the value of the benzoates and hippurates, both in cases of gout and of gravel and calculus; and I hope ere long to bring the further results before the profession. I can confidently affirm that I have already obtained great advantage in the treatment of these diseases from their employment.

I frequently give the benzoic acid in the form of benzoate of sodium; but, if I wish at the same time to increase the quantity of the urinary excretion, then I give the benzoate of potassium or of lithium; and, if there be an abnormal acidity of the urine, some alkaline citrate.

Seeing that herbivorous animals excrete hippuric acid in a greater or lesser quantity according to the character of the food upon which they are fed, I cannot help thinking that some article of diet might be devised for those who suffer from the diseases above-mentioned, which might, at least to a great extent, keep in check the tendency to form and deposit uric acid.

THE library of the Obstetrical Society is now closed during the removal from 291, Regent-street, and will be re-opened at 54, Berners-street in about a fortnight.

Gulstonian Lectures
ON
STERILITY IN WOMAN.

Delivered in the Royal College of Physicians, London,

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LECTURE III.—PART II.
ITS PREVENTION AND CURE.

THE regulation of desire and pleasure cannot be passed over without some remarks. Of the moral condition of those in whom these feelings are absent, or in whom they are in excess, I shall say nothing; and this silence is not because the moral condition is either unimportant or without influence on bodily health and on sterility, but because there is little that requires to be said. The healthy performance of the function of childbearing is surely connected with a well-regulated condition of desire and pleasure; and a well-regulated condition is not a reduction to a minimum or total absence, neither is it excess. I have already said that both desire and pleasure may be, and not rarely are, entirely absent; and it is my opinion, founded partly on the distinct testimony or concurrence of married women who are examples of the evil, that an education injudiciously ascetic, as it may be called, sometimes produces this deficiency, which is a source of much disappointment and disaster in married life; and this view is corroborated by what is quite certain—namely, that by indulgence the feelings may be, and not rarely are, produced or increased. Writing on sterility, Ambrose Paré gives directions how to increase desire with a view to conception. Equally important is excess of desire and pleasure, and its reduction within moderate limits is equally advantageous. Religion, morals, bodily health, and childbearing all combine to exalt the value and importance of moderation, and to show the evils of absence or of excess. The influence of separation of married people, or of living without cohabitation for a long time—a period, say, of seve al months—is very widely recognised; and it is prob^{r} bly dependent on the increase of desire and pleasure in th^{a} se who have little of either, and on the restoration of them ^{o}in those who have been rendered nearly impotent by excess. This power of separation has appeared to me to be far more fre quently operative in women who have had a family than in those who are absolutely sterile; and remarkable examples are not rare.

I have heard and read of, but have not personally witnessed, the disappearance of sterility after recovery from a fever; and this result is ascribed to the prolonged separation caused by the illness. The explanation may be correct, but it does not appear to be the natural one, for fevers are powerfully injurious to general health, and are known to disorder the ovarian and uterine functions.

I have already spoken of sterility as caused by marriage, especially in the young, and we know the sterility of prostitutes and the sterility of confined animals who couple freely or excessively, and it is probable that all these infertilities may have a bond of union in their being due to excessive desire and pleasure, or to excessive sexual indulgence, or to both combined.

In animals, especially in cows and mares, the semen is described as being not rarely expelled from the vagina soon after coitus; and this failure to retain is said to be, in some cases, owing to the animal not being duly in heat. Attempts are made to cause retention by dashing cold water over the buttocks and external parts. A like failure to retain the semen is frequently complained of by women, who describe it as coming away either immediately after coitus, and without leaving the horizontal position, or only on getting up. In either case women often attribute sterility to this failure of retention, and seek a cure of it with a view to fertility. Further, I have repeatedly been distinctly informed by careful women who habitually have this disagreeable imperfection, that conception has followed the rare occasions on which they have, as they noticed at the time, retained the semen. That this non-retention is often only partial is made probable by the occurrence of pregnancies in women who describe themselves as invariably suffering from it. It is rarely complained of except by the sterile, and I believe it is rare among the fertile. I have also a very strong impression, which I have no data to corroborate statistically, that it is especially common among those sterile women who have not sexual pleasure. I know nothing that modifies this condition, but believe that the production of sexual pleasure may have favourable influence. It probably depends on the failure of the timely dilatation of the cervix uteri, and perhaps of the uterine openings of the tubes so as to admit the semen, and on the failure of the simultaneous production of a condition of increased temporary negative abdominal pressure, or of that adspiratory action of the abdomen which numerous old and recent authors invoke to explain the mechanism of fecundation; or it may depend on the failure of both of these conditions of ordinary successful coitus. Before leaving the subject I must add that the facts as to this profluvium seminis are not of the highest degree of security; for, so far at least as I am concerned, they are not more than the statements of intelligent wives. They are probably quite accurate, as they are certainly given in good faith; but it is possible that mucous discharges or glandular secretion through the ducts of Cowper or Duverney may be, in some cases, mistaken for semen.

The immoderately great consumption of alcoholic drinks by women, without their necessarily ever reaching the stage of drunkenness, is so common and so potent a cause of disorder and disease that it requires special mention. It is possible that much of the influence of this drinking might be justly ranked as part of mere overfeeding, whose injurious effects we have already spoken of, but this is far from certain. Indeed, while I am unable to give any strong evidence of the specially injurious action of alcohol, considered as an article of diet, I am much disposed to this view, being led to it by the good results in practice which I believe justly attributable to desisting from the use of it. The instances on which I rely are cases in which I have, by physical examination and other modes of inquiry, been unable to discover any evidence of disease of the internal genital organs. It would not make the conclusion more assured to enumerate cases which are not in number or other circumstances sufficient for a demonstration. But I may mention the leading features of one which could not but strike the most careless observer. This patient was brought to me to be cured of sterility, and, as some prolonged treatment was expected, she proposed to reside near me for a time. She was between twenty and thirty years of age, and had been several years living in fruitless marriage, absolute sterility. On two occasions, with at least two years of interval, I declared my inability to do anything against the sterility by local means because I could discover no disorder or disease of the womb or its appendages. Having some suspicion of too liberal use of alcoholic drinks, I recommended teetotalism. After the lapse of a few years the patient, now a happy mother, was again brought to me on account of some trifling complaint, and I was told as follows: Her drinking habits having increased, she was induced to go into seclusion with rigid surveillance, and in this she lived for about a year without any kind of alcoholic drink. When she came home again she had lost much flesh, but was in good health, and she maintained what were now teetotal habits. She immediately became pregnant, and pregnancy recurred. Such cases are not singular, and induce a belief in a special hostility of alcoholic drinking to fertility.

But alcoholic drinking has, in addition to the general or constitutional disorder which it produces, well ascertained power, in certain cases, to induce disease of the internal genital organs. That which is most easily and distinctly made out is chronic ovaritis. It often comes and goes in the presence or absence of the cause. When it is present sterility is not always a result, but frequently so, and its cure is often followed by the disappearance of the sterility.

We have, lastly, to consider the power of various local and chiefly uterine diseases and disorders, which have too much engrossed the attention of the profession hitherto. As I have already remarked, there can be no rational doubt that these local affections have a very limited scope of action; are, indeed, quite subordinate to the great causes of sterility affecting populations or classes. That they should have been the chief study of practitioners, as distinguished from statesmen or medical officers of health, is not only natural but in a sense just; for the practitioner cares not for the

population or the class, but for the individual. If he is to do any good to the individual it is by discovering something amiss and providing a remedy that he must work. And where is a practitioner first to look for a special cause of sterility if not in the essential organs of generation? Here he finds several diseases, only in recent years the subject of scientific investigation, so-called ulcerations, displacements, strictures, subinvolution, and others, upon which he easily founds a theory, generally a mechanical one, of the sterility which he at once proceeds to attempt to cure. If he fails to cure that does not discourage him; for, in the present state of therapeutics, the reputation of remedies is founded more upon faith than upon evidence.

The wisest practitioner is he who, giving due weight to all items of knowledge acquired in regard to a disease or an unnatural condition, sets limits to his faith or his expectations, and scrutinises the evidence on which a treatment is based, and this all the more severely if a certain result of the treatment is gain to himself.

Spasmodic dysmenorrhœa is the most striking morbid condition connected with sterility. It has its seat in the womb or its neighbourhood, and it is by most gynæcologists regarded as a purely local affection, having as its cause obstruction to the passage of the menstrual blood from the womb into the vagina by local or general congenital contraction of the canal of the cervix uteri. The nature of the affection and the place it occupies in the theory of sterility make me believe it to be a local affection in only a very limited sense—only in the same sense as irregular action of the heart or of the bronchi is a local affection. Its frequency, apart from numerous other considerations, is enough to make the pathologist hesitate to accept an alleged deformity of the cervix uteri as its cause. Besides, when the very rare alleged cause has really presented itself in rare cases of real pinpoint os uteri, dysmenorrhœa has not been always present; in my practice it has been always absent.

When evidence is led in favour of the obstruction theory of dysmenorrhœa the argument from the success of treatment by enlargement of the passage is generally held to be irresistible, and its force to be, if that is possible, increased by the cure of sterility which often accompanies the cure of the dysmenorrhœa, or, at least, follows the enlargement of the passage. The frequent success in curing or relieving dysmenorrhœa by this treatment, and the occasional success in curing sterility, are not matters of doubt. I have, indeed, no hesitation in saying that while many other pieces of advice are of great value in the treatment of the associated conditions of dysmenorrhœa and sterility, and in the treatment of them when not associated, this is the only medical interference that approaches in dignity to a cure. By this means, and chiefly by this alone, have cures such as concern us here been effected. In attestation of this utility we may cite the very great number of much vaunted means by which the object is effected, by very many kinds of knives, many dilators, many expanders, many scissors, by tents of various kinds, by bougies of various shapes, all of them, when put into use, producing enlargement of a part or of the whole of the passage through the cervix uteri.

For those who deny the existence of contraction it is not necessary to say a word further against the explanation of cure by mere enlargement. For them that is certainly not the explanation. And it is easy to frame theories of the cure of dysmenorrhœa by enlargement of the passages, which may have the great superiority over that founded on obstruction, that they may also explain the cure of the associated sterility. Now, though the very simple cervical obstruction theory has been held sufficient to account for the sterility as well as for the dysmenorrhœa it is plainly in this respect impotent.

While it is doubtful whether any menstrual blood is regularly passed through the internal extremities of the tubes into the uterus, it may justly be held sufficient by the dysmenorrhœal obstruction theorists to consider the passage of menses through the cervix alone. But they, of course, extend their theory of causation and cure to sterility, and here it is semen whose passage has to be studied, not menstrual fluid, and the cervix is not the only narrowed part of the semen's route, for it must pass not only through the cervix, but also through the Fallopian tubes. And if the seminal obstruction theorists find impediments in the cervix with its comparatively considerable dimensions, such as to allow their knives or scissors to work, what will they say of the closed capillary channel of the internal extremity of a tube? Their cure of sterility merely enlarges a passage where there was no apparent mechanical obstruction, and leaves untouched a passage where there is apparent entire impermeability.

That the obstruction theory (in all except its absolutely certain applications, as in imperforate hymen—cases to which we here make no reference) is excessively exaggerated must be plain to everyone who regards the almost innumerable cases of fecundation in extraordinary circumstances—cases without penetration; cases of impregnation in peculiar conditions, through the rectum or through the urethra; cases in advanced uterine cancer; cases in procidentia with great cervical hypertrophy; cases in extreme distortion by fibroids; and others. In this matter the appeal to comparative anatomy is most instructive, and the argument from it very evident. The apparent mechanical difficulties in the way of the semen passing the cervix are, in some mammals, increased in an extreme and often a curious manner, without any consequent obstruction. To this matter Kehrer and Lott have paid particular attention, and have shown that the apparent mechanical difficulties affect the construction of the male organ in its relation to the female passage as well as the female passage itself.

To me it appears theoretically reasonable to connect the dysmenorrhœa and sterility with rigidity of the cervix, and the opinion that it is so is confirmed by its being actually discovered in most cases. Anyone familiar with the use of increasingly sized bougies in dilating the cervix must recognise the greater force required in dysmenorrhœal than in healthy women, and the increase of painfulness of the process as the force used, slight though it is, increases. The overcoming of this rigidity by temporary dilatation, not the overcoming of a mechanical obstruction, seems to me in some mysterious way to exert a generally beneficial influence on that part of the process of fecundation in which the uterus is implicated during insemination. For it may be held as almost certain that, during the natural sexual orgasm in coitus, the internal ends of the tubes, which we almost never see but as absolutely closed passages, are temporarily opened inside, and that the same happens to the cervix; and while it is probable that such wide opening of the cervix is not essential for fecundation, it must be held as facilitating it or rendering it more probable. Besides, this opening is an indication that the whole nervous arrangements as well as the physical organs are co-operating to produce the object in view. The opening here pointed out has, in its natural or healthy performance, and in the obstacle from rigidity, close analogy with similar processes going on during the premonitory and first stages of labour; and the dysmenorrhœal pains have analogy in the irregular painful and useless contractions and pains of these stages of labour, and of the hours immediately following delivery.

No other disease, local or presumably local, has such importance in the theory of sterility as spasmodic dysmenorrhœa. This great place is established by the frequent association of the two conditions, and by the probable connexion of the dysmenorrhœal neurosis with profluvium seminis, with disorder of sexual desire and pleasure, and with other derangements of the sexual orgasm of coitus. But dysmenorrhœa has its place confirmed in a unique way, for its cure is universally admitted to be a direct step towards the cure of sterility, and this can be said of no other local condition.

During recent times no disease has more engaged the attention of gynæcologists than the catarrh and peculiar changes of the cervix uteri connected with it, known generally by the name of ulceration of the neck of the womb. To it, even when in a very slight form, has been ascribed a very great pathological importance, and the Croonian Lectures of West seem to have had less effect in bringing the profession to a just judgment of its comparative insignificance than the overshadowing influence of some other temporary novelty. Among other evils which this very prevalent disease has been alleged to produce is sterility; but there is not a tittle of evidence that it has any special influence in preventing conception; and we have, for guidance as to this matter, our best help in the fact that conception and natural pregnancy are extremely common during its continuance. Among twenty-six cases observed by Grünewaldt, with a view to the study of the changes of the cervix uteri in the first month of pregnancy, he found only eleven with a quite healthy state of the cervical mucous membrane. Six had papillary and nine catarrhal ulceration, which no doubt existed before conception.

Almost identical statements may be truly made regarding versions and flexions, and I do not repeat them. But in

this department of gynæcology increase of knowledge not only tends to diminish importance, but to show that the great mass of versions and flexions are conditions of simple health.

The importance of those diseases which prevent the commencement of uterine pregnancy, or render such commencement improbable or difficult, needs only to be mentioned. To Grünewaldt we owe a careful statement of the extent and potency of this class of diseases, and for them he, as already said, vindicates a morbid superiority over those conditions which prevent conception.

The diseases and disorders of the genital organs, whether they act in preventing conception, in preventing uterine pregnancy, or in interfering with its natural healthy progress, are operative in individual cases, and demand the most careful study of the practical physician, for it is chiefly through his power over them that he can hope to cure sterility. That in the early stages of the study of these diseases their influence should be exaggerated is natural. At all times there can be no doubt their study and treatment will be most important, not only on their own account, but with a view to the improvement of the general health. In the case of those local diseases which may be proved to have no special influence in diminishing fertility, their removal, by increasing the general health, will help towards a removal of sterility.

REMARKS ON THE

REMOVAL OF THE ENTIRE TONGUE WITH SCISSORS BY THE WHITEHEAD METHOD.

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(*Concluded from page 631.*)

A FEW remarks will now be made upon the other methods of removing the entire tongue, by way of contrasting them with Mr. Whitehead's plan.

(*a*) *Removal by the galvanic écraseur.*—The use of the heated loop of wire has not of late years kept up its early reputation, and chiefly for the following reasons: 1. The necessary apparatus is expensive and often cumbrous. 2. It causes a most extensive slough, which not only takes some time to separate, thus exposing the patient to the risks of septic broncho-pneumonia and septicæmia, but also, when separating, may give rise to hæmorrhage. This hæmorrhage may be very difficult to arrest owing to the sloughy state of the tongue, and is especially dangerous at this time in consequence of the weakly state of the patient, whose recovery from a very severe operation is not likely to have been hastened by the sloughy condition of his mouth. Other objections which the galvanic écraseur[1] shares with the ordinary instrument are: 3. That owing to the great strain which is put upon it, the wire must, however carefully fixing needles have been introduced (and this is not always, when the ulceration extends far back, an easy matter), draw dangerously, as it is gradually tightened up, upon the site of the disease. 4. The risk of breaking. The thermo-cautery has been used in some cases. It is, however, an inconvenient instrument to make use of far back in the mouth, and it has the further disadvantage, which is also shared by the galvanic écraseur, that as it sears through the tissues of the tongue it so alters the look and feel of parts that the surgeon may leave diseased portions behind without knowing it. Theoretically, of course, this may be avoided by cutting very free of the disease, but in practice this is not always easy. If, to facilitate the tongue's coming forward, the mucous membrane at the side and the pillars of the fauces are first snipped through with scissors, and the tongue then severed with the thermo-cautery, the patient has still to run all the risks of the detachment of a large slough in his mouth.

(*b*) 1. The ordinary écraseur, though it causes distinctly less sloughing than the galvanic loop, still leaves the parts in a much more bruised condition than a pair of clean cutting scissors. 2. There is the serious danger of the loop during the extreme tightening which it undergoes drawing close to the cancerous spot. 3. There is the risk of the wire breaking, though this risk may be much diminished by splitting the tongue and dividing each half separately, as recommended by Mr. Morrant Baker. Another objection to the wire écraseur is often seen at the close of the operation, when the loop, though screwed up to the uttermost, is still too coarse to divide the lingual artery, which is pulled out by the écraseur, and often requires division with scissors, and then torsion or a ligature. 4. I have already alluded to the dyspnœa which is always liable to accompany operations for the removal of the tongue; the swollen condition of the organ produced by the pressure of the écraseur sometimes produces this complication to a serious degree.

(*c*) Mr. Syme's operation of dividing the symphysis has been recommended when the floor of the mouth is involved. It is not only an extremely severe measure, but it is objectionable because in these patients, who are often much reduced in strength, it is liable to be followed by necrosis and tardy union of the sawn surfaces, which will interfere seriously with the patient's comfort and ability to take solid food. Furthermore, it appears to me to be needless, as diseased tissues in the floor of the mouth can usually be removed by scissors and a tenaculum, aided, in severer cases, by an incision in the submaxillary region for the extirpation of glands.

(*d*) The incision through the cheek has the advantage of giving additional room, and offers facilities for adjusting and watching the action of the écraseur. It heals readily, but the scar may be objectionable, and in any case the wound left after removal of the tongue is, at first, so painful that no additional wound should be made, if it can be avoided. The readiness with which the tongue comes forward when removed by Mr. Whitehead's method has already been alluded to.

(*e*) Professor Billroth has practised ligature of the lingual arteries preliminary to removing the tongue with scissors.[2] Dr. Elder, of Nottingham, in recording[3] a successful case of removal of the tongue by Mr. Whitehead's method, states that in repeating the operation he shall ligature the linguals first, as he considers the danger from hæmorrhage greater than Mr. Whitehead is inclined to admit. Mr. Treves,[4] in the account of a case in which he removed the tongue by scissors, though, as he frankly admits, not by Mr. Whitehead's method, correctly speaking, as this was departed from in several important particulars, found the hæmorrhage so profuse that he states that in future he should first ligature the linguals.

It may be worth while to point out here that this step is by no means always easy of execution. As in a case recorded by Mr. Warrington Haward,[5] it may be impossible to find the artery above the hyoid bone, owing to enlargement of the lymphatic glands and general infiltration of the tissues. If it be sought for close to its origin from the external carotid, the superior thyroid or facial may be mistaken for it, this being more likely if the point of origin of these vessels is at all abnormal, or if two of them arise together. Another difficulty which occurred to one of the most experienced operators in Europe, Professor Billroth, may be told in his own words:—"A. K——, aged fifty-seven, had first noticed pain and hardness of the right half of the tongue six weeks before admission. A cancerous ulcer, which extended far back, was seen on the right side of the tongue; no enlarged glands could be felt; he could only open the mouth to a slight extent. In order to avoid

[1] Mr. Barker has shown (THE LANCET, Aug. 16th, 1879; ibid., 1881, vol. i., p. 702; Clin. Soc. Trans., vol. xii., p. 152) how very commonly, after extensive removal of the tongue by the écraseur, patients succumb to rapidly fatal affections of the lung, which come on either as a part of a general pyæmia or as a more local disease from the direct passage downwards of fetid emanations from the sloughing wound. To obviate these risks Mr. Barker admits pure warmed air to the lungs by means of a preliminary tracheotomy, the mouth and nostrils being plugged with cotton-wool, and the floor of the mouth being drained by means of a long tube passed through under the chin into a basin of Condy's fluid. I believe that these ingenious precautions, which must be somewhat irksome to the patient, and one of which, the tracheotomy, involves some additional risk, will be rendered superfluous by Mr. Whitehead's method, owing to the clean-cut surface and little liability to sloughing which this operation leaves.

[2] In his Clinical Surgery, translated by Mr. Dent for the New Sydenham Society, Professor Billroth speaks of having ligatured the lingual artery twenty-seven times. [3] THE LANCET, 1882, vol. i., p. 306.

[4] Ibid., vol. i., p. 641. To compare with the above two cases, Dr. Marshall, of Preston, records a case in which this operation (THE LANCET, 1882, vol. i., p. 306) was completed in four minutes and a half, the total loss of blood being estimated at rather less than an ounce.

[5] Clin. Soc. Trans., vol. x., p. 130.

hæmorrhage as much as possible, I commenced by ligaturing the right lingual artery. I performed the operation *lege artis*, but had most extraordinary difficulties in discovering the artery. Finally, I thought I saw it pulsating, and placed a ligature round it. In removing the lower and under portions of the tongue, tolerably free hæmorrhage occurred from the lingual artery, and I had my doubts as to whether this vessel had actually been tied. The patient died two days later of septicæmia. Post mortem we discovered that the lingual vein had been ligatured instead of the artery. Every surgeon knows the difficulty of tying the lingual artery in old people: the vessel lies so deep, that it is very difficult to distinguish it from thick-walled, distended veins, especially when, owing to heart disease, as in this case, the veins pulsate. Never previously had I met with a lingual vein of such thickness."[6]

I believe that any surgeon who, having made use of other methods of removing the tongue, shall be led to try Mr. Whitehead's operation, will give this a decided preference, as being equally safe, while it is far simpler and more speedy than any other.

FOUR CASES OF EXCISION OF THE ENTIRE TONGUE BY SCISSORS.

BY FREDERICK TREVES, F.R.C.S.,
ASSISTANT SURGEON TO, AND SENIOR DEMONSTRATOR OF ANATOMY AT, THE LONDON HOSPITAL.

IN the four following cases the entire tongue was removed from the mouth by scissors, by what is known as Billroth's method, the lingual arteries having been previously ligatured in the neck. For one of the cases (Case 2) I am indebted to the kindness of my colleague, Mr. James Adams, by whom the operation was in that instance performed. The procedure adopted in each of these cases was precisely the same, and was briefly as follows: The patient having been anæsthetised, the linguals were first secured in the neck. Each vessel was reached by a curved incision that commenced behind at a point some little way below the jaw, opposite the anterior edge of the masseter, and that was continued down to the level of the hyoid bone, and finally carried up to a point behind and below the symphysis menti. The submaxillary gland having been displaced, the artery was exposed by cutting through the hyoglossus muscle in the floor of a triangle formed above by the ninth nerve, and below by the converging bellies of the digastric muscle. In no instance was there any difficulty in securing the vessel, although, owing to the depth of the incision, the proceeding is somewhat tedious. Care should be taken not to disturb the submaxillary gland more than possible, and it is most desirable that no part of the gland should be included in a ligature. Billroth, in speaking of ligaturing portions of the pancreas in pyloric resection, has drawn attention to the evils that often follow upon the application of a ligature to a solitary gland; and Case 4 serves to illustrate some of these inconveniences. Both arteries having been secured, the mouth is forced open by a Mason's gag, and the tongue drawn forwards by means of a stout ligature passed through its anterior part. The entire organ is then cut out with a pair of strong straight scissors. The frænum is first freely divided, and one blade of the scissors being thrust beneath the mucous membrane of the floor of the mouth, that structure is divided on each side between the tongue and the jaw, as far back as the epiglottis. Returning again to the middle line, the hyoid muscles are divided from before backwards, and, after a few vigorous snips with the scissors, the organ is free. The bleeding that follows is very insignificant, and usually is immediately arrested by firm pressure with a sponge. It is only far back, in the region of the tonsil, that any bleeding may occur that does not cease almost spontaneously. In two of the cases given below a touch with the cautery at once checked the oozing; in the other instances it required no treatment. The cut surface left after the removal of the tongue can be readily inspected by bending the patient's head a little forwards, and pushing up the floor of the mouth from the outside. As illustrated by these four cases, the operation may be spoken of as practically bloodless. For the first three days after the operation the patient is fed entirely through an india-rubber catheter passed into the gullet from the nose. On the fourth day he is able to feed himself, and usually finds it most convenient in swallowing his food to place the head very much to one side, so that the fluid may run by the side of the larynx into the œsophagus. The patient is up on the seventh day, if all goes well, and strong enough to leave the hospital by the tenth or eleventh day after the operation. In the cases detailed below the mouth was kept constantly washed out with iced permanganate of potash water for the first week after the excision. When cough is complained of, considerable relief is given by causing the patient to inhale steam charged with a little compound tincture of benzoin. The incisions in the neck were dressed with carbolised lint, and all healed, with the exception of the right incision in Case 4, by first intention. Three patients out of the four made a rapid recovery, and were up and about by the seventh day. The fourth patient, a feeble and badly nourished man, died on the fifth day of pneumonia.

I think that the following advantages may be claimed for this procedure of Billroth's:—1. It is comparatively simple and requires no elaborate apparatus. 2. By its means more of the tongue can probably be excised than can be removed by the écraseur, no matter how applied. With the écraseur it is somewhat difficult to vary the exact amount to be removed in particular cases, since the surgeon can only deal with what can be included in a noose. It may be noted, moreover, that with the scissors an extensive excision can be performed without such complication as division of the jaw or cheek, or an opening into the floor of the mouth above the hyoid bone. 3. The procedure is practically bloodless, and the great source of danger in tongue operations is thus removed. It appears to me that on this ground Billroth's method is infinitely superior to Mr. Whitehead's modification of the same. Mr. Whitehead, it is well known, removes the tongue with scissors, but without previous ligature of the lingual arteries. The operation has been successful in the skilful hands of the surgeon who introduced it; but it would seem to subject the patient to a totally unnecessary and serious risk, a risk that is not counterbalanced by any other obvious advantage. 4. The wound left after the removal of the tongue is, in a surgical sense, extremely simple, and is actually a clean incised wound. Such a wound must compare favourably with the external charred surface left after the galvanic écraseur and with the lacerated wound that follows the use of the cold wire. When the tongue is removed by scissors there are no superficial sloughs to come away from the floor of the mouth, and there is therefore less opportunity for the formation of a fetid discharge. 5. The intra-oral part of the operation occupies but a brief space of time, the actual excision requiring probably about two minutes. It is needless to say that when a patient is anæsthetised a prolonged operation upon the tongue is objectionable in many ways. The cold wire, if cautiously applied for the removal of the entire tongue, will usually not have cut its way through in thirty minutes. 6. Through the incisions made in the neck the surgeon is enabled to readily remove enlarged glands and to detect such bodies when they are not to be felt through the skin.

CASE 1.—Male, aged fifty-six. Epithelioma extending over the greater part of the dorsum of the tongue; the floor of the mouth was free; there were no enlarged glands to be felt. The ulceration had commenced four months previously. On June 7th, 1882, I removed the tongue by the method above described. No hæmorrhage except a little from the posterior part of the incision, which was readily checked by a touch with the actual cautery. The patient was in very feeble health at the time of the operation. He did well for six days, when he developed a sharp attack of pneumonia, of which he rapidly died. The wounds in the neck were almost entirely healed. The autopsy showed no evidence of pyæmia.

CASE 2.—Male, aged fifty-three. Admitted under the care of Mr. Adams, July 20th, 1882. The epitheliomatous ulcer involved the centre of the tongue, extending to the edge. It had commenced two months previously. Two small glands could be detected below the jaw. On Aug. 3rd the tongue was removed. No hæmorrhage to speak of. The incisions in the neck healed by first intention. The patient was up and about the ward on the seventh day, and left the hospital to return to work on tenth day after the operation. His temperature after the operation never rose above 99°.

CASE 3.—Male, aged forty-five. Extensive epithelioma of the left side of the tongue of four months' duration. The

[6] Loc. supra cit., p. 112.

floor of the mouth was free. On October 6th, 1882, the tongue was removed. No hæmorrhage to speak of. Highest temperature reached after the operation was 101° on the evening of the third day. The temperature was normal on the fifth day. The wounds in the neck healed by first intention. The patient was up and about on the seventh day, and left the hospital on the eleventh day after the operation. I have lately (January, 1883) seen this patient. The surface of the stump is well healed and the patient is perfectly comfortable and in good health.

CASE 4.—Male, aged fifty-eight. Extensive epithelioma of the right half of the tongue. The posterior limits of the mass could not be well made out. Induration was extending towards the floor of the mouth. Speech was much affected and great pain complained of. There were some enlarged glands in the neck on the right side. On November 1st, 1882, the tongue was removed. The enlarged glands were removed through the incision made for ligaturing the right lingual. In removing these glands the salivary gland was damaged, and I thoughtlessly included a little piece of it in a catgut ligature. The cancer proved to have extended very deeply, and it was found impossible to cut entirely beyond it. There was a little bleeding from the cut surface near the tonsils, which was readily checked by the actual cautery. On November 3rd the patient was sitting up in bed reading the paper. On the 6th he got up. By the 8th the wound on the left side had quite healed, but the wound on the right was discharging. He was detained in the hospital in the hope that the wound would heal, but on the 14th, when he was finally discharged, the incision was still open. The patient experienced considerable relief from the operation. He lost the pain in the parts, and his speech was much more intelligible without the tongue than with it. Here it was found impossible to remove the entire disease, but the main condition was rendered much more endurable by the operation. I hear (January, 1883) that the epithelioma is now rapidly growing again and is beginning to invade the neck below the right side of the lower jaw.

Gordon-square, W.C.

ON THE

USE OF CONCENTRATED SOLUTIONS OF SALINE CATHARTICS IN DROPSY.

BY MATTHEW HAY, M.D.,

DEMONSTRATOR OF PRACTICAL MATERIA MEDICA IN THE UNIVERSITY OF EDINBURGH.

IN the course of an investigation of the physiological action of saline cathartics, now in course of publication in the *Journal of Anatomy and Physiology*, I examined the effect of the administration of a saline cathartic on the concentration of the blood,[1] and I succeeded in demonstrating from experiments on man and the dog that, if the salt be given in the form of a concentrated solution when the alimentary canal of the animal contains little or no fluid, it produces an almost immediate and very decided concentration of the blood, owing to the blood becoming deprived of a large amount of its water through the intestinal secretion which the salt excites; if, however, the salt be given dissolved in sufficient water, or if the alimentary canal contain sufficient fluid at the time of the administration of the salt, no such concentration of the blood occurs. In the former case the hæmatic concentration is very considerable, and is very quickly produced. It reaches its maximum within half an hour after the ingestion of the salt; and is so marked that after giving three-quarters of an ounce of sulphate of soda dissolved in three ounces of water to a man, whose alimentary canal must have been practically free from fluid, I found that the number of blood corpuscles in each cubic millimetre of his blood rose from about 5,000,000 to 6,790,000. An almost similar result was obtained with a dog. This excessive state of concentration does not last very long. In from one to one and a half hours after the administration of the salt it begins to decline, and continues to do so until at the end of about four hours the concentration is reduced to the normal. This reduction is effected not by the absorption of fluid from the intestines, but by the abstraction of lymph and other fluids from the tissues, and the quantity thus abstracted must be very large. These alterations of the volume of the blood take place apparently without any corresponding change of the blood-pressure. The blood, therefore, would appear to abstract the tissue fluids in virtue solely of its concentrated condition, and, in the nature of its action, to behave somewhat like a sponge. The presence of the salt in the blood may also influence the tissue fluids by acting on them endosmotically. Some hours after the administration either of a concentrated or of a dilute saline solution the blood undergoes another concentration, less in degree than the first, but continuing for the greater part of the day. This second concentration is evidently due to the diuretic effect of the absorbed salt. Doubtless, during this period also, as during the first concentration, the tissue fluids are being drawn upon.

From these remarks it will be readily understood how that a concentrated solution of a saline cathartic ought to prove of considerable service in certain cases of dropsy, where, owing to the great accumulation of transuded serum in vital parts and elsewhere, there is imminent danger to life and an urgent need for an immediate and active removal of a portion of the transuded fluid. In such cases the value of saline and other active cathartics has long been appreciated, but I am not aware that use has been made of the more powerful action of a concentrated saline cathartic. It removes the dropsical fluid by two channels: by the intestines and by the kidneys. No other purgative has this double action. It is questionable, also, if any other purgative acts so rapidly in reducing the fluids of the blood. This is of the greatest importance in certain critical cases of dropsy. It is almost perfectly certain that no other purgative excites intestinal secretion so powerfully, and at the same time produces so little irritation of the intestinal mucous membrane and so little disturbance of the body generally. This is an additional recommendation for the employment of the concentrated saline. The diluted salt, the form in which it is always given, has practically, in so far as it affects dropsical fluids, the action only of a diuretic. Based on these considerations, I have made several trials of the concentrated salt in suitable cases of dropsy, and in most of them with very satisfactory results. It is sufficient for my present purpose to give details of one of these cases.

J. A——, a young lad, aged ten, had been an out-patient of the Edinburgh New Town Dispensary for over a year, when, as one of the physicians to the dispensary, I was asked to visit him. He had been suffering for several years from heart disease. I found him propped up in bed, being unable to lie down, and showing signs of great distress. His breathing was rapid and shallow, and he was suffering from great dyspnœa, with frequent coughing. There was a well-marked ascitic distension of the abdomen and general anasarca, observable especially in the lower limbs. A loud mitral regurgitant murmur could be distinctly heard over the whole of the front of the chest. The pulse was rapid, small, and weak. An abundance of soft râles, audible all over the chest, especially towards the base of the lungs, indicated a pronounced œdema of these organs. The dyspnœa was so great that he sat with his arms straight and almost perpendicular, and with the hands pressed on the bed, elevating and fixing the shoulders to bring the extraordinary muscles of respiration into play. He had been treated previous to my seeing him with almost every variety of renal and cardiac stimulant, and at intervals with cathartics. At the time I visited him, besides some medicine to relieve the cough, he was having iron and digitalis several times a day. In spite of this active medicinal treatment, his condition was gradually becoming more serious, and the dropsy and breathlessness were increasing. The administration of a saline cathartic, dissolved and diluted in the usual way, had been tried, it so happened, two days before I saw him, but its action was attended with only slight relief. As I thought this a suitable case for the use of the concentrated saline, I ordered that he should have as little as possible of food and liquids during the night, in order to free the alimentary canal from digestive juices or other fluids, and permit of the full action of the salt, and I asked his mother, who was nursing him, to give him next morning three-quarters of an ounce of sulphate of magnesia dissolved in two tablespoonfuls of water, no water to be given afterwards. The result ex-

[1] Vol. xvi., p. 430.

ceeded my expectation. When I called next evening, the patient was lying quietly sleeping in his bed. The anasarca was greatly diminished, and the dyspnœa had almost entirely gone, and his breathing was much slower. The pulse was also less rapid, and the pained, anxious expression of his face had vanished. His mother told me that she had given him the salt as I had directed, and that in less than an hour afterwards the purgative action of the salt manifested itself, and there were repeated evacuations in the course of the next few hours; on each occasion the water seemed to "gush" from him, and he passed an unusually large quantity of urine. There evidently had not been merely a removal of so much fluid from the blood and tissues as was necessary for the usual dilution of the salt within the intestines, but the sharp, sudden withdrawal of fluid from the tissues by the concentrated blood had initiated a movement of the fluid into the latter, which had continued for some hours after the direct action of the salt and the blood had ceased, and until the tissues were in great part rid of their superfluous liquid. Next day I was pleased, on entering, to find him on the floor amusing himself with the other children, and looking perfectly comfortable and happy, and, except for his wasted and pallid features, showing little evidence of having been quite recently so dangerously ill. I was told he had not felt so well for five months before. I continued to see him for a month afterwards, during which time he resumed taking the digitalis and iron, and throughout this period he had no return of the dyspnœa, and the dropsy was comparatively trifling. Owing to the removal of the family afterwards to England, I obtained no account of his further progress. The benefit of the concentrated purgative was in this case very striking, and, perhaps, more so than in any other case in which I used it. The conditions necessary for the successful administration of the salt are that the nature of the dropsy should be such as to permit of the full action of the salt. I have found it more useful in general dropsies than in local dropsies, and of general dropsies most beneficial in those dependent on a stasis of the circulation, as cardiac dropsy. The cases in which I have employed it are, however, as yet too few to warrant me in making definite generalisations. The other requisite conditions are that the alimentary canal, by the previous abstinence of the patient for some hours previously from food, and especially liquids, should be allowed to become as free from fluid as possible, and that the salt should be administered along with the smallest possible quantity of water. Sulphate of magnesia, on account of its being soluble in less than its own weight of water, is one of the most suitable of the saline cathartics for this purpose. Sulphate of soda is, owing to its greater insolubility in water (1 in 4), less suitable. The alkaline tartrates and Rochelle salt do not, however, present this objection, and may therefore be found useful. The phosphate of soda and the sulphate of potash are too insoluble to be of any service.

Edinburgh.

OBSERVATIONS UPON THE BACILLUS OF TUBERCLE.

BY SAMUEL WEST, M.D., M.R.C.P.,
PHYSICIAN TO THE CHEST HOSPITAL, VICTORIA-PARK, ETC.

A CONSIDERABLE number of observations upon the presence of the bacillus tuberculosis in the sputum of phthisical patients have been already published, with a very remarkable and perhaps surprising concordance. To this record I wish to add the results of my own observations. I have examined myself at least fifty cases of phthisis, and, with those which have been examined for me, the number is much larger. They were all cases in which from physical and other signs the diagnosis of phthisis was certain. The sputum was treated by Ehrlich's method, and stained with fuchsin.

1. The bacilli were found present in every case without exception, although in a few cases they were in such small numbers as to be found only after repeated and careful examination. 2. They varied much in number in different cases, and even in the same case at different times. In some instances the decrease in number was coincident with improvement in the general condition of the patient, but this was not always so. The number appears to vary with the rate of breaking down of the lung, and is so far a rough measure of the gravity of the case, but there is no relation between the number of the bacilli and the extent of the physical signs. 3. When numerous the bacilli were separate or grouped together. In some of the most acute cases which I have examined they were separate, though existing in very large numbers. In other cases they were grouped together in twos or threes, or in large numbers, and they occurred occasionally in very large masses. As a rule, when the bacilli are in large numbers, they are also grouped together. 4. In some instances the bacilli contained bright bodies, which have been called spores, and these were most numerous in cases of very rapid progress, but they did not occur in all the acute cases. Similar small bright bodies were often found free when the bacilli contained the spores, as if they were possibly free spores. 5. There seemed to be but little variation in the size of the bacilli either in the same case or in different cases, and I am unable to confirm the statements made by Balmer and Fraentzel that different stages of development may be traced in the bacilli in sputum, and that their stage of development is of importance in prognosis.

Besides the sputum, I have examined in some few cases also the contents of the cavities in the lungs, and have made microscopical sections of the lung itself. The bacilli are found, it appears to me, in largest number and in greatest masses, not in the lung tissue, but in the caseous material lining the walls of the cavities. This observation has been made also by Balmer and Fraentzel, and its accuracy in some cases I can confirm. It is a very remarkable and important fact, if it be established, that the bacilli develop most freely, not in the lung tissue itself, but in the walls of the cavities; and it provides an explanation of the variation in number and grouping of the bacilli in different cases, and in the same cases at different times.

Although the importance of Koch's discovery cannot be overestimated, still, from a clinical point of view, too much must not be demanded from it at present. The bacillus is found in all cases of undoubted phthisis, and is therefore a new fact confirmatory of the diagnosis; but as it is probable that it can occur in the sputum only when excavation has taken place, we may expect to find the bacilli absent in very early cases, even when, it may be, the physical signs are sufficient, together with the constitutional symptoms, to justify the diagnosis of phthisis.

If, however, it prove from histological observation that there are cases of phthisis in which the bacillus is not found in the tissues or in the cavities, its presence will then become of very considerable diagnostic value. The possibility, however, of such a discovery is not great, seeing that in the heterogeneous cases of phthisis hitherto examined the bacilli have been present in the sputum of all alike. Moreover, in some of the rarer cases of phthisis, cough and expectoration are absent for some time. Two cases of this kind I have at present under observation. Both, I believe, from the physical signs to be cases of phthisis; but in neither is there any expectoration. In such cases excavation only takes place later in the disease, and therefore no help to diagnosis will be obtained in the early condition from the presence of bacilli. Bacilli are, I think, evidence only of excavation, and increase in most cases therefore *pari passu* with the physical signs. If, however, after a time of progression the disease ceases to advance, it is possible that the number and grouping of the bacilli may give evidence of it, but the evidence will, I think, be more clearly marked in all probability by improvement in the general condition of the patient. We have, however, at present not a sufficient number of observations upon these points.

Regarding then, as I do at present, the number and arrangement of the bacilli in the sputum as evidence of active excavation of the lung, it is clear that their value in prognosis will be the same as that of excavation. They will give, it is probable, moreover, an easier means of estimating the rate of this excavation than we at present possess in the physical signs, and will prove therefore of some aid in prognosis. They will be large in number, and grouped together in cases of rapidly progressing excavation; small in number and not grouped in cases of slowly progressing excavation; and they will, by varying with the rate of excavation, provide a measure of the present progress of the disease. The relation between the temperature of the patient and the bacilli in the sputum has not yet been fully worked out. So far as my own observations go they show a close relation—i.e., those cases, as a rule, which have well-marked hectic fever, exhibit the largest number of bacilli

in the sputum, as indeed would be expected if they are a measure of the amount and rate of excavation.

In the recent debate at the Medical Society Dr. Gibbes could not have understood the purport of my remarks, or he would not have credited me with the astounding statement that I thought there was nothing more to be made out in this subject. What I did say was this: that Koch's experiments were so masterly and complete, that little more had been done hitherto by subsequent observers than to confirm the results he had arrived at; and up to the present this is unquestionably correct. The field of research which Koch's experiments have opened out is very large. Few can even guess what a crop of knowledge its cultivation will yield. No one surely would be so rash as to prophesy that it would prove barren soil. It is in giving us the first real hold of the disease in its essential nature that the value of Koch's discoveries lies. If it be true that phthisis and tubercle in all its manifestations be due to a special bacillus, the imagination hurries on to the time when the bacilli may be killed or rendered harmless by appropriate remedies, or the body be protected against the ravage of the germs of tubercle, as it is already against those of small-pox, or, in the case of animals, of anthrax.

With reference, however, to the question of the contagiousness of phthisis, this discovery introduces dangers of its own. The conclusion is so tempting that the risk arises of its being adopted without proof. Yet it seems certain, from clinical observation, that in this country, at any rate, phthisis is not contagious in the ordinary acceptation of the term. The analogy of typhoid fever and pneumonia suggests itself at once; for in both these diseases, just as in consumption, isolated cases of direct infection or contagion occur from time to time, and yet they would never be classed under the head of contagious diseases in the ordinary sense. And I quite agree with Dr. Broadbent in his observations at the Medical Society's debate, that the selection of the question of the contagiousness of phthisis by the Collective Investigation Committee was hardly judicious at the present time, unless those in charge of the investigation are prepared themselves very carefully to sift the evidence brought forward in each case before giving it the sanction of their authority.

Wimpole-street, W.

INTRODUCTORY NOTE ON THE

PHYSIOLOGY OF THE CARBOHYDRATES IN THE ANIMAL SYSTEM.[1]

BY F. W. PAVY, M.D., F.R.S.

MY last communication to the Royal Society was entitled "A new Line of Research bearing on the Physiology of Sugar in the Animal System." During the time which has since elapsed I have been actively continuing my investigations in the direction started, and the results obtained give an entirely new aspect to the whole subject of the physiology of the carbohydrates in the animal system.

Modern research has shown that, besides the well-known carbohydrate principles, such as sugar, &c., there are several dextrins distinguishable by their optical properties and their cupric oxide reducing power. From the colloidal principle starch, which has no cupric oxide reducing power, principles (dextrins) are producible by the action of ferments possessing gradually increasing cupric oxide reducing power, until maltose is reached, which constitutes the final product, and which possesses a little more than half the cupric oxide reducing power of glucose. This is one foundation point connected with the researches I have been conducting upon the physiology of the carbohydrates in the animal system. The other foundation point is that the various members of the carbohydrate group are brought into glucose by the agency of sulphuric acid and heat.

Proceeding upon these facts, and taking the cupric oxide reducing power before and after subjection to the converting action of sulphuric acid and heat, I have prosecuted investigations upon the transformation of the carbohydrates within the animal system with the result of acquiring knowledge of an altogether unexpected nature.

Hitherto what has been observed as regards the transformation of carbohydrates by the action of ferments and chemical agents, has been a change attended with increased hydration — for example, the passage of starch into the successive forms of dextrin and maltose, and cane sugar into glucose. The issue of the researches, however, which I have been conducting recently is to demonstrate the passage of carbohydrates exactly in the opposite direction by the action of certain ferments existing within the animal system. Alike in the alimentary canal, the circulatory system, and the liver, the conditions exist by which this kind of transformation is effected. From the mucous membrane of the alimentary canal a ferment is obtainable which converts (1) glucose into a body possessing the same kind of cupric oxide reducing power as maltose; (2) cane sugar into maltose, and not glucose as formerly asserted; and (3) starch either into maltose or a dextrin of low cupric oxide reducing power.

The presence of carbonate of soda modifies the action of a maltose-forming ferment, and leads to starch passing into a dextrin of low cupric oxide reducing power instead of into maltose. The portal blood contains a ferment which possesses a maltose or a dextrin-producing power, and the contents of the portal system during digestion are charged with a notable amount of maltose sometimes, and at other times a low cupric oxide reducing dextrin. After the introduction of glucose into the circulatory system I have observed the presence of maltose. The liver also contains a ferment capable, under certain conditions, of carrying glucose into maltose, and I have further witnessed, by the same kind of action as the sugars and dextrins are moved from one to the other, the conversion of a carbohydrate into the colloidal material belonging to the animal system (glycogen), which holds the analogous position of starch in the vegetable kingdom. Evidence has likewise been supplied that by an action of the same nature as that which moves the carbohydrates from one to the other in the carbohydrate group, they are, under certain conditions, carried into a body out of the group, and thence not susceptible of being brought into glucose by the converting action of sulphuric acid; and, on the other hand, under other conditions, a substance is brought into the carbohydrate group and its nature made recognisable by the converting action of sulphuric acid and its cupric oxide reducing power.

The subject as it even now presents itself is a large one, and I propose to deal with it in detail in a series of communications. The first will be devoted to that which refers to the alimentary canal.

[1] Read at the Royal Society, April 12th, 1883.

CASE OF POISONING BY CITRATE OF CAFFEINE; RECOVERY.

BY CHARLES H. F. ROUTH, M.D.

A PATIENT of mine, aged sixty-three, had been under my care for some time. He was a very sober but very weakly man, very nervous, but of very good spirits notwithstanding. He had been ailing a good deal for the last two years with headache, especially at the back of the head and round the right orbital region. There was also occasionally severe chestache, which appeared to impede his breathing sometimes; and severe backache, not interfering with his movements, but referred to the region of the kidney. Several remedies were tried—alkalies, iodide of potassium, salicine and salicylates, hydrochlorate of ammonia, bromides, guaranas, blisters behind the ears, pediluvia, &c. He continued under me from Jan. 3rd up to Feb. 20th, and was much better and stronger. There was no heart disease, but it was very weak in its action. The urine was also normal and free from albumen; sp. g. 1025. On Feb. 20th, as my patient did not improve as readily as I wished, I ordered him to take one drachm of citrate of caffeine three times a day, and a sleeping draught at night. I meant Bishop's granular effervescent citrate, the only medicinal preparation in vogue. Unhappily I did not specify this exactly, never doing so, and having always received this preparation when ordering it simply as citrate of caffeine. But unfortunately, also, the chemist who made it up supplied the ordinary citrate of caffeine pure and simple. My patient took one powder at 4 P.M.—i.e., a whole drachm. Symptoms followed immediately. Burning in throat and gullet, succeeded by giddiness, faintness, nausea, numbness, and tremors of extremities; pain and tenderness of bowels and stomach; great thirst; dry tongue. At 4.45 he was

violently sick, with vomiting of digested matters, and also violent purging. Much urine was also passed. This sickness and vomiting recurred at 5.45. On leaving the closet he could scarcely walk, and had to be assisted. These vomited matters consisted also of digested matters. I was absent at the time, and having ascertained that it was the pure citrate that the chemist had supplied (for a powder was brought to me), I managed to get to my patient at 6 P.M. He was then collapsed; pulse hardly perceptible, irregular, 120; skin cold and clammy, but all his senses perfectly intact, not even headache; sensibility of skin nowhere impaired, a symptom not presented throughout. I at once administered half an ounce of ipecacuanha wine. In about a quarter of an hour he was very sick. I now administered two tumblers of lukewarm water, and waiting another twenty minutes and no sickness resulting, I again gave two teaspoonfuls of ipecacuanha wine, and made him sick by passing my finger down his throat. He soon felt a little better, and I now gave him one drachm of animal charcoal with ammonia, and two and a half drops of nitrite of amyl. He rallied a little; so placing him near the fire, I left him for a few minutes. My son, Dr. Amand Routh, soon arrived to take my place at 7.30. The patient in the mean while had been very sick, had vomited largely, and also all or the greater part of the charcoal.—7.30: Condition as before; hands and feet icy cold; muscular tremors in hands and feet; cardiac oppression, sense of impending death. Pupils equally dilated, indeed rather contracted. Some lumbar pain and tenderness, some aching about the masseter muscles. Ordered sinapism to heart; to put his feet in hot water; ammonia, alcohol, and nitro-glycerine.—10 P.M.: Debility and depression of spirits, as before. Pulse rather firmer, hands and feet warm; lumbar pain worse; no urine passed. Taking greasy mutton broth at frequent intervals, and half an ounce of brandy every four hours. Throat feels very sore, and has a burning sensation down the œsophagus. Organs of sense have been throughout unaffected, and the head is free from pain. To continue one drop of nitro-glycerine solution every two hours. The patient continued to improve till 1.30 A.M. of the 21st, when I left him. I saw him with my son the next morning. He complained still of feeling very ill, but he was certainly not so weak; his pulse was stronger, but the top of the head was very painful; had urinated freely. The right orbital region was also very painful. Nitro-glycerine was continued; no sickness; took milk and soda-water freely. Cold to head to relieve pain. As he complained still of a burning sensation in the mouth, I ordered ice, but this producing intense abdominal pain it was stopped. The diluent drinks with raw beef-juice were freely taken. Later the headache increased and the pain in back, both of which were relieved by mustard poultices. Later I substituted digitalis and gave up the nitro-glycerine. From this time he improved. The prostration gave way, and he complained mainly of the back. On February 24th the pulse was 80, not over-strong; urine, specific gravity 1025, no albumen, doubtfully a trace of sugar. Lumbar pain relieved by pressure, only muscular; no headache. Food mainly bread and bread-and-milk, with brandy and soda-water.

In sum, the symptoms were those of a vegetable and depressant irritant. But for the violent sickness, I think the dose would have been fatal, especially with so weak a man. It is, I believe, the only case on record of poisoning in the human subject by caffeine, and as such is, I think, worthy of record. I am, perhaps, to blame for not having written more precisely the drug meant; but the chemist who supplied it, I think, was equally to blame for not knowing that pure caffeine in these large doses would necessarily act as a poison. It is usually said convulsions occur in these cases. Here nothing worse was observed than muscular tremors. It may be worthy of remark that the mind was and has continued unaffected throughout. This case is also instructive as showing what a very powerful agent we possess as a nervous medicine in caffeine, if it be used in proper medicinal doses.

Montagu-square, W.

BEQUESTS TO MEDICAL CHARITIES.—The Brompton Hospital for Consumption and the Hospital for Incurables, Putney, are amongst the institutions between which the residuary estate of the late Mr. Fred. Childers is to be divided.—Mr. Thomas Cowie bequeathed £1000 to the Royal Infirmary and £250 to the Hospital for Sick Children, Edinburgh.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

ACUTE TETANUS, FOLLOWING A CONTUSED WOUND OF THE FLESHY PART OF THE END OF THE THUMB; DEATH.

(Under the care of Mr. GEORGE LAWSON.)

FOR the notes of this case we are indebted to Mr. Guilding.

The following case is an example of acute traumatic tetanus, a disease from which a patient very rarely, if ever, recovers. On Monday, January 22nd, the man met with a comparatively slight injury to the thumb. On Thursday the premonitory symptoms of tetanus commenced in a feeling of slight stiffness at the back of the neck. On Friday there was an extension of these symptoms, and on Saturday afternoon feeling himself worse the patient applied to the hospital and was admitted. When admitted he had had no convulsive attacks. The convulsions did not begin until eight o'clock in the evening, and the patient died in one of them at about ten o'clock the following morning. The treatment consisted in the subcutaneous injection of the extract of Calabar bean, repeated injections of morphia, and the putting the patient under chloroform. The thumb was amputated with the faint hope that the removal of the source of irritation might exercise a favourable influence in quieting or arresting the convulsions. Unfortunately the medicines exercised no power in controlling the progress of the disease; they certainly eased the suffering of the patient, but the tetanic convulsions increased in severity, and in fourteen hours from the first convulsion the patient died. The following are the details of the case.

Eli L——, aged fifty-one, a strong muscular man, with dark complexion and iron grey hair, was admitted into Broderip ward on Jan. 27th, 1883, with tetanic symptoms following an injury to the right thumb. On Monday, Jan. 22nd, five days previously, the patient crushed his finger, and at the same time tore the skin over the centre of the pulpy tissue which covers the last phalanx of the thumb for about a quarter of an inch in extent. From this time the finger was very painful; it inflamed and suppurated. On Thursday afternoon the patient felt a slight stiffness at the back of the neck. On Friday he found that his neck was very hard and rigid, and that his head was drawn forcibly back; he also noticed that he could not open his mouth as wide as usual. On Saturday, Jan. 27th, feeling himself worse, he came to the hospital in the afternoon, and was at once admitted.

State on admission: The patient spoke very indistinctly, owing to his utter inability to separate his lower from his upper jaw, and on applying force to them it was impossible to part them. He complained of pain at the epigastrium, and down the back. On lifting the patient up in bed the head was pulled violently back on to the shoulders, as if by a steel spring, and the muscles at the back of the neck could be felt tense and rigid. There was no rigidity or spasm of any of the other parts of the body. The patient lay in an apparently drowsy state, but could be easily aroused, and answered all questions readily. The bowels were constipated, not having been opened for five days. Temperature 97°. On examining his thumb the tissues over the first and second phalanges were inflamed and swollen, and from a small wound about a quarter of an inch in length over the palmar surface of the last phalanx there was a slight discharge of pus. Any attempt to swallow increased the spasms to such an extent that it was impossible to give him either medicine or food by the mouth. About 8 P.M. the patient began to have severe convulsive attacks, which were greatly aggravated by the least attempt to touch him. The body was violently contracted into a condition of opisthotonos, the legs were rigid, and the muscles of the back like rods of iron. The inter-

costals, and probably the diaphragm, were in a state of strong spasm, as respiration during the attacks was arrested, and the face and surface became of a dark-bluish colour. The flexors of the forearm were free from spasm. These attacks came on about every half-hour, some being more severe than others. At about 11 P.M. he had a most severe attack; his muscles of respiration were involved; he ceased to breathe, his heart and pulse stopped, and the patient was black in the face, when, with a sudden bound, the pulse began again, and he recovered for the time. In this attack his tongue was caught between his teeth, and almost bitten in two. Mr. Lawson then saw the patient, and amputated the thumb after he was put under the influence of chloroform. The patient inhaled nearly four ounces of chloroform before he was well under its influence, and even then his limbs were rigid. Before awaking from the chloroform the patient was injected subcutaneously with half a grain of the acetate of morphia. Under the combined effect of the chloroform and the morphia the patient was quiet for nearly three hours. At a quarter to three o'clock the convulsions recurred. The first convulsion was at about a quarter to three o'clock; the second at half-past three; the third at a quarter-past four; the fourth at about a quarter to five. From this time the convulsions were repeated every ten or fifteen minutes, and he died in one of them at ten minutes to ten on Sunday morning.

The treatment during the short time the patient was in the hospital was as follows: Soon after admission he was injected subcutaneously with the one-sixteenth of a grain of the extract of Calabar bean, and this was repeated in about one hour. Finding no relief, a third of a grain of the acetate of morphia was injected subcutaneously. The injured thumb was then amputated, and whilst the patient was under the influence of chloroform he was injected with half a grain of the acetate of morphia.

Necropsy (abstract from the notes of post-mortem examination made by Dr. Fowler).—Thorax: Organs healthy; some post-mortem congestion. Kidneys were enlarged, congested, and indurated; capsule adherent; on stripping off the capsule a granular surface was left, but no wasting of cortex. Brain: Vessels (veins) of meninges over occipital region were full of blood (post mortem). On removing the membranes no marked changes were seen in the pia mater or convolutions. On sections being made through the brain, no decided changes could be detected with the naked eye. There were some post-mortem coagula in the lateral sinuses. The base was unchanged. Cord: Membranes showed some post-mortem congestions, otherwise they were healthy. There was an enormous number of calcareous patches in the membranes, extending from above the cervical to below the lumbar enlargement; but beyond this nothing abnormal was detected.

ROYAL ARSENAL HOSPITAL, WOOLWICH.

CASE OF TRAUMATIC GANGRENE OF THE PENIS AND SCROTUM; NECROPSY.

(Under the care of Surgeon-Major W. F. STEVENSON.)

W. J——, a painter, married, aged forty-three, was admitted into hospital on Jan. 3rd, 1883, with great swelling and ecchymosis of the penis and scrotum, but not extending into the perineum. He stated that on the previous day he had strained himself while at work by attempting to support a tent-pole (weighing thirty pounds) which was falling on him, but that he did not fall and did not receive any blow or direct violence of any kind. He suffered considerable pain at first, but remained at work during the afternoon. When he went home he applied fomentations.

On admission, at 10.30 A.M., the scrotum was as large as an infant's head from effusion of serum into the cellular tissue, and the penis much enlarged from the same cause; these parts were also almost black from ecchymosis. The perineum was not affected. There was not much pain. On the left side of the penis the cuticle had been removed from a piece of skin about the size of a half-crown, and a thin grey slough remained. The man looked very ill; he was pale and cold; the pulse weak and 136; he had voided water freely during the night, and stated that it contained blood. A catheter (No. 10) was passed with ease, and a small quantity of urine containing no blood was drawn off. During the day he passed a very little clear urine without the use of the catheter. In the evening he was still further collapsed; the skin was cold and moist, and the pulse imperceptible. During the night he was very restless, and next morning his condition, both locally and constitutionally, was much worse; the swelling had passed into the perineum, and that of the penis and scrotum had increased. Gangrene of the parts first affected had evidently taken place. A very little, if any, urine had been passed during the night. An erysipelatous redness was extending over the pubes and abdomen. Tongue was furred and dry; surface cold and clammy; no pulse. A catheter was passed, but no urine was found in the bladder. Several incisions were made into each side of the penis, scrotum, and perineum, giving exit to a large quantity of serum. Two incisions were also made into the abdominal wall where the erysipelas appeared, but the circulation was so feeble that blood hardly flowed from them. In the evening the swelling was much less in consequence of the continuous drain of serum which had taken place from the incisions. There was no urine in the bladder. The state of collapse was profound, and the man was delirious and very restless. This condition lasted until 1 A.M., when he died exhausted. The treatment had consisted in efforts, by means of warmth and stimulants, to combat the state of collapse which was well-marked even on admission, but which, notwithstanding all endeavours to the contrary, increased up to the time of his death, about fifty-hours after the strain was supposed to have occurred. Opium was given internally and fomentations used locally.

On post-mortem examination, the internal organs were found healthy; there were some old pleuritic adhesions in the right side of the chest. The bladder was healthy and quite empty; the urethra was healthy in appearance, except towards the outer end, where, for about one inch, there was some ecchymosis. The cellular tissue of the penis and scrotum was infiltrated with serum; the body of the penis was distended with dark blood, which oozed out on section of the corpora cavernosa; the tunica vaginalis contained very little fluid. That such a condition should have originated in a strain, such as described, would seem strange. A witness at the inquest which took place stated that the tent-pole fell between the man's legs. If this occurred, which the man himself denied, possibly the penis received a contusion at the situation of the ecchymosis found in the urethra, causing rupture of some of the vessels in the corpora cavernosa, resulting in such distension of those organs as to interfere to such an extent with their circulation as to bring on gangrene of the penis, which spread backwards to the neighbouring parts.

MANCHESTER ROYAL INFIRMARY.

CASE OF POPLITEAL ANEURISM; RUPTURE INTO KNEE-JOINT; AMPUTATION THROUGH THE THIGH; RECOVERY.

(Under the care of Mr. WHITEHEAD.)

FOR the following notes we are indebted to Mr. G. Preston.

William B——, aged forty, a labourer, was admitted on Jan. 1st, 1883, suffering from aneurism of the left popliteal artery. His previous history was as follows: About seven months ago the patient's left leg was crushed just below the knee. The joint, he says, was severely strained by the accident, but it was not so badly hurt as to keep him from his work. On the following morning he noticed a small lump, about the size of a marble, at the lower part of the popliteal space. He suffered no pain in it; but still he considered it advisable to stay at home that day and rest his leg. On the next day, the second after the accident, he went to his work as usual, and for fourteen days he noticed nothing further as regards the lump, but at the end of this term he experienced some slight pain when walking or when he tried to extend his leg fully. On examining the swelling he found that it had increased to the size of a hen's egg. Though the patient still went on with his work, the condition of his leg remained the same up to a week before his admission, when he sustained what he describes as another strain of the same knee; by the following day the swelling had increased considerably in size, and he suffered great pain in the knee and down the leg. He stayed in bed and applied hot fomentations and poultices to the swelling, the result being a gradual increase in the size of the swelling and an increase in the pain. He now, for the first time, consulted a medical man, who sent him to the hospital.

On admission the left knee was much swollen, the outline of the pouches of the synovial membrane being particularly well marked out, but there was no pulsation of them, and the patient stated that he had never noticed any pulsation in front of the knee; behind the knee, in the popliteal space, and to all appearance almost filling it, was a fusiform swelling, which was distinctly pulsatile and expansile; very slight pressure on the femoral artery completely stopped the pulsation; the pulse could not be felt in the tibial arteries, and the left leg was much colder than the right, but there was no œdema of the leg; a very loud systolic bruit could be heard over the tumour, and also over the femoral artery. The patient had severe pain in the knee-joint and down the leg to the toes. He had aortic stenosis and regurgitation, and a hypertrophied left ventricle. He had a well-marked "water-hammer" pulse. The patient was put to bed, and a Signoroni's tourniquet applied to the femoral artery at once; the flow of blood was not stopped entirely, though nearly so. The tourniquet was kept applied for about two hours at a time (the patient could not bear it longer) during that day and the following, but on the third day after admission his leg became extremely painful, and he took the tourniquet off. It was now found, on examination, that the knee was more swollen and tense, and that there was distinct pulsation above and below the patella in the situation of the distended pouches of the synovial membrane of the joint. The tourniquet was again applied so as to completely control the blood-supply to the limb; the tourniquet was slackened on Mr. Whitehead's arrival, but now the pulsation in the knee had ceased. That the aneurism had ruptured into the knee-joint was made certain by drawing off blood from the joint with a small syringe. Owing to the man being the subject of aortic disease, with consequent strong pulsation in his arteries, together with the fact that the vessels appeared to be atheromatous, it was thought advisable to abandon the ligature in this case, and resort to amputation at the junction of the middle and lower thirds of the thigh.

Pathological examination.—It was found that there was a large fusiform aneurism of the popliteal artery; the knee-joint was distended with blood, and on removing this, it was found that there was a small circular aperture in the posterior ligament of the joint, which communicated with the sac of the aneurism. The surrounding structures were perfectly free from any extravasated blood.

After the operation the tourniquet was kept in position for fourteen days, moderating, to a slight extent, the flow of blood to, or rather the strength of the arterial pulsation in, the stump, as secondary hæmorrhage was considered very likely to occur. No such catastrophe happened, however, and now the stump is quite healed, and the patient convalescent.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Occlusion of Vessels by Oil.—Adeno-Sarcoma of Testicle and Abdominal Viscera.—Sarcomatous Ulcers of Back.—Hypertrophy of Limbs.

THE ordinary meeting of this Society was held on the 17th inst., Mr. Arthur Durham, Vice-President, in the chair. The material which the Society had to deal with was greatly in excess of the time at its disposal. Many card specimens of interest were exhibited. The chief part of the evening was taken up with the reading and discussion of some cases of tumours of doubtful affinities.

Dr. WILKS introduced Dr. Handfield Jones with the view of permitting the latter gentleman to bring forward some interesting microscopic specimens which seemed to show that the smaller cerebral vessels might become blocked by globules of oil as the result of atheroma of the larger. The patient was a man, aged forty-eight, who had been under the care of Dr. Broadbent at St. Mary's Hospital. He had suffered for some time from mental aberration, of which restlessness and excitement were the chief features. In former years the man had drunk a great deal. The urine contained about one-third of albumen, and there was general œdema. At the autopsy the heart was found to be hypertrophied, and weighed twenty-five ounces; there was no valvular mischief; the pleuræ and peritoneum contained an excess of fluid; the liver was enlarged; the kidneys weighed seven ounces and a half, were slightly granular on the surface, and were well pronounced examples of morbus Brightii. Examination of the vessels showed that the large basal arteries were the seat of atheromatous changes. In the small vessels about two or three removes from the capillaries oil drops, plugging the lumina of the arteries, were to be seen. Sometimes these oil drops existed alone, at others they were associated with fatty molecular matter. The oil plugs were spherical or cylindrical, with rounded ends; sometimes elongated and pyriform. The oleaginous masses seemed to be inside the vessel, and blocked the whole channel; some were of great length, as much as one-nineteenth of an inch. In many specimens some blood-clot was entangled and mixed with the oily material. The question necessarily arose, whether these globules of oil originated *in loco*, or were transferred from the more proximal branches of the artery affected. Where the plug of oil existed without any molecular matter either in the vessel or its wall, it was probable that it had originated at a distance, and was of the nature of an embolus; otherwise it was legitimate to regard the material causing occlusion as having developed at the site affected. The material was regarded as of an oleaginous nature, because of its general appearance and its association with atheroma of the large arteries, and because it for the most part gave a black colouration when treated for a long time with osmic acid. The plugs showed some preference for projecting angles of the affected vessels. The atheromatous process was regarded as a primary fatty degeneration: no inflammatory exudation cells could be detected. Ziegler had described fatty changes in the cells forming the capillary wall occurring in the first place close to the nuclei, and which led to the narrowing of the capillary channel. Cornil and Ranvier made no mention of such changes as Dr. Handfield Jones described. Four other cases had since been examined, and the conclusion was arrived at that marked atheroma of the larger vessels might be detected without any accompanying change in the capillaries. Drawings illustrating the microscopical appearances, as well as the actual sections, were exhibited.—Dr. WILKS thought the specimens of sufficient importance to demand the benefit of a report by a special committee. To this the meeting and Dr. Handfield Jones assented.—Dr. CAVAFY inquired whether the serum had been examined; if it had been found to be milky, this condition of lipæmia would tend to throw light on the nature of the vascular plugs. The blood had, however, not been specially investigated.

Mr. VICTOR HORSLEY showed a specimen of Cystic Sarcoma of the Testicle, with secondary growths in the other viscera. The case was also of interest from the association of many congenital defects of structure. The man was a spare built individual, aged thirty-one, height about five feet four inches; the foramen ovale was widely patent, measuring an inch and a quarter at its longest diameter; it was divided by a median trabecula. No trace of a Thebesian valve could be found; there was partial atresia of the pulmonary orifice, and the segments of the pulmonary valve were adherent and formed a fibrous cone; the tricuspid valve and chordæ tendineæ were thickened and puckered. The right testicle was ill-developed, the kidneys and spleen were unusually lobulated, and there was a congenital inguinal hernia. Eighteen months ago the patient was kicked in the left testicle; the growth of the tumour followed at a short interval. On admission into the hospital, a rough systolic murmur, loudest at the third left cartilage, was heard, and a very remarkable venous pulse was noted, the pulsation extended down to the veins at the elbows. In the neck a powerful double pulsation was detected, which consisted of two series of alternating beats; one was synchronous with the radial pulse, the other was a little before it. Tracings were taken of this mixed carotid and jugular pulsation by Marey's tambour; the respiratory rhythm was traced by Burdon-Sanderson's stethograph. It was demonstrated, apparently without flaw, that the second pulsation was synchronous with, and probably due to, the auricular systole. It was certainly too late to be an exaggerated dicrotic wave. Its rhythm proved that it was independent of respiration. The diseased testis measured 3in. by 1¼in.; the tunica albuginea was thickened; the body was riddled with small cavities; the stroma was enlarged, and was seen under the microscope to be made up of fibrous tissue and masses of sarcomatous tissue. Round cells, varying in size from a red disc to a leucocyte, were seen, and many hæmorrhages had occurred

both into the cysts and into the solid structure. The smaller cysts were lined with columnar epithelium, the larger with flattened cells; much mucin was also present. Masses of secondary nodules riddled the liver in every direction; there were a few in the lungs. But none of the visceral nodules presented a cystic structure; they were merely sarcomatous. Extravasations were seen in the hepatic growths. The only other nodule was seen in the left side of the wall of the bladder. The venous radicles and lymphatics were free from disease. The injury was probably the exciting cause of the tumour of the testis; the other new growths probably developed in the various parts as the result of a defective state of the general health. Mr. Horsley was inclined to think that his case lent some support to the doctrines of Cohnheim and Leopold—viz., that residues of embryonic tissue were the probable foci of development of the various tumours; this view was believed to receive some confirmation from the fact that numerous congenital defects were present in the case narrated.—Mr. BUTLIN said that as far as he had understood, Mr. Horsley wished to ascribe the tumour of the testis, and all the secondary growths, to the injury which the man had received eighteen months previously. He could not agree with the suggestion that the case supported the teachings of Cohnheim. He might see some reason for associating the new growths with the congenital defects if the former had occurred at or near the site of the latter. He was disposed to regard the sarcocele as one of lympho-sarcoma with cysts which probably originated from the tubuli seminiferi. It was an extraordinary circumstance that such tumours of the testicle gave rise to no secondary affection of the lymphatics. — Mr. VICTOR HORSLEY, in reply, said the kick was merely regarded as determining the growth of the testicle. The amount of small-celled growth was small compared with that of the fibrous tissue, and there was very little reticulum; for these reasons he did not consider the case one of lympho-sarcoma. The growths in the liver and lungs were detected during life after the removal of the testis; their progress of growth was watched over the six weeks which elapsed before death.

Mr. DAVIES COLLEY showed specimens removed from a single woman, a cook, aged twenty-nine, who in September, 1881, came under his care. The family history was good, there was no history of syphilis, the previous health was faultless. Eighteen months previously two small tumours the size of walnuts appeared on either side of the lumbar spine. These were treated, and disappeared; six months ago a tumour grew from the left gluteal region and one from the right lumbar region, the former increased without pain, and at the time of admission into Guy's Hospital measured four or five inches across. It had ulcerated; its upper border had a crescentic shape, the lower border was elevated, and the neighbouring skin was of a livid-red colour. It thus seemed to be spreading at one part and healing at the other, very much like a severe tertiary syphilitic ulceration. The lumbar tumour had a bossed outline; measured five inches across each way and was raised about an inch; the surface was smooth and glazed. Iodide of potassium and mercurials gave no improvement. The general health began to suffer, and the patient died from exhaustion in November, 1881. Shortly before her death a similar tumour appeared in another part of the left gluteal region above the old ulcer. The post-mortem examination was made by Dr. Goodhart, who detected an infiltrating soft fleshy growth spreading into the subcutaneous tissue of the growing edge of the ulcer; this tissue on section showed yellow tawny coloured areas, and was sharply defined towards the neighbouring connective tissue. Both psoas muscles were affected. The third lumbar vertebra was softened, but no deposit of cheesy matter was seen. The microscopical appearances of all the growths were similar. There was a delicate misty-looking reticulum of connective tissue, enclosing large numbers of round nucleated cells like leucocytes, and some small coloured masses like myeloid cells. There was no appearance as of the conversion of round into fusiform cells as occurs in gummata. There were no tubercles in the internal viscera. The sharp definition of the tumour was different from ordinary lympho-sarcoma. It was certainly difficult to exclude the diagnosis of mere chronic inflammatory growth.

Dr. FREDERICK TAYLOR read a somewhat similar case. The man, a gardener, aged forty-two years, first came under treatment for symptoms of nervous origin; there was no history of syphilis or gonorrhœa. The previous history was good, except for the occurrence of small-pox some years before. The nervous symptoms had been present for six weeks only. A patch of unilateral alopecia was observed six months before. There was staggering gait, tremor of hands, and difficulty of speech, probably due to a disordered action of the tongue. Under the use of iodide and mercury the nervous symptoms improved. In October two swellings appeared, one on the inside of the right knee and the other on the back. These swellings increased in size, so that the one on the back measured five inches by four in December. There was partial ulceration with scabbing on both tumours. The one on the lower extremity gradually subsided. The tumour on the back began to slough, and assumed a greenish appearance mixed with pale pink areas of granulations. Mr. Durham then saw the case, and advised calomel and vapour baths. Iodide of potassium had been given without effect; it was even thought that the eruption might have been due to this drug. At Christmas, 1882, fresh lesions appeared; numerous oval, red, thick, raised patches of erythema appeared nearly all over the cutaneous surface. Some of those on the legs began to slough, others ulcerated and formed scabs, whilst others subsided. The large tumour on the back also further sloughed, and left a broad area of granulations. A hard, firm swelling, the size of a Barcelona nut, appeared on the front of the chest, and looked like a sebaceous tumour; this spontaneously disappeared. In January, pyrexia, albuminuria, and œdema of the legs set in, followed by laryngitis and death from œdema of the lungs in February. At the autopsy the skull was found thickened, the pericranium red and thick in two places, each the size of a shilling, the larynx was ulcerated, and the cartilage was laid bare; there were the signs of acute pericarditis; also large white kidneys. Many of the cutaneous tumours were like boils on section, others were seen to be in various states of sloughing. The epididymis was quite smooth and densely white, as if in a condition of chronic inflammation. The border between the tissues of the tumours and the surrounding structures was ill defined, the small round cells of the growth infiltrated the intervals between the nerve and muscle fibres in the neighbourhood. Syphilis was naturally thought to be the cause of these appearances during life, but no trace of a gummatous tumour was to be found; the body of the testis was normal; there were no signs of tubercle. The rapid course and extensive distribution of the disease were remarkable.—Mr. DURHAM was very much struck with these cases; they were of a nondescript type, and might be regarded as forming a group of tumours intermediate between inflammatory new formations and genuine tumours. He mentioned an anomalous case which happened in a young woman; the cervical glands became enlarged and ulcerated, the surrounding subcutaneous tissues were infiltrated, ulceration and sloughing extended, and the patient died. At the autopsy glandular enlargements were found in the abdomen. Another case was instanced; this occurred in a man, aged fifty-six years. A pimple formed on the right leg, ulcerated and scabbed, and finally fell off; a little tumour, however, appeared at the same place, and gradually developed, and subsequently a number of small tumours arose in various parts—legs, ankles, and arms. The tumours increased in size, some became confluent, others remained isolated; ulceration occurred in some, in others sloughing. The patient died. No visceral complication was found. No important glandular enlargements were detected.

Mr. PYE SMITH narrated the case of a man who presented a series of Small Tumours, which at their first appearance looked like purpura, but ultimately took on the character of sarcomata; they affected the skin and subcutaneous tissues, and seemed to be secondary to a tumour of the colon. Dr. Hilton Fagge had collected a number of such cases, and had contributed a valuable article in the Guy's Hospital Reports. —Dr. STEPHEN MACKENZIE remembered a case under the care of Dr. Andrew Clark, fourteen years ago, in which masses of glandular tissue had developed and become ulcerated in the front of the chest; this was regarded as an example of lymphadenoma. A second instance occurred in a patient the subject of anæmia with retinal hæmorrhages; there were hundreds of tumours all over the body, varying in size from a pea or nut to a Tangerine orange; there were typical lymphomata. The viscera also showed similar changes. In this case there was no ulceration, though it was reasonable to suppose that ulceration might have set in had the patient lived.—Mr. BENDALL mentioned a remarkable case of disseminated tumours which Mr. John Clay of Birmingham had published in THE LANCET last

year. The patient had several attacks of erysipelas. The tumours affected only the cutis vera, and infiltrated the neighbouring tissues.—Mr. BUTLIN said that the tumours under discussion ought probably to be given a place to themselves. They were between infective tumours and ordinary new growths. He suggested the possibility of the dependence of lympho-sarcomata and other new growths on the presence and development of micro-organisms.

Mr. EVE showed specimens of Congenital Hypertrophy of Limbs. The foot was affected in a girl, aged twenty-four years. The skin of the sole was enormously thickened, and although there was general hypertrophy, the plantar integument was enlarged out of proportion to the other tissues. In this case there was also an asymmetrical enlargement of the left side of the head, which showed itself also in the brain and tongue. The limb had been noticed to be enlarged from birth, but a rapid increase had occurred during the last seven months. Another specimen was from a man aged thirty-four years. The enlargement of the hand was seen at birth; but only a year before admission to the hospital the extremity began to increase much more rapidly. The lymphatic channels and spaces were enlarged. This was not, however, regarded in the light of a causal connexion. Altogether, forty-six such cases had been recorded. Mr. Eve mentioned what he believed to be a unique case; there was no enlargement at birth; the whole hypertrophy had developed in four months. In those cases in which there was a congenital history, the tumours tended to be similar to dermoid cysts in their nature, whilst in the rarer kind the tumours agreed with the new growths which developed in later life. In one instance fatty tumours, fibroid tumour of the parotid, fibrous epulis of lower jaw, osseous outgrowth of the patella six inches and a half long, exostosis of the os calcis and first metatarsal bone, all in the left side, were associated with hypertrophy of a limb. These congenital hypertrophies were liable to a peculiar form of ulceration, not epitheliomatous.

Dr. Lediard of Carlisle showed two card specimens: (1) Dry Caries of Knee-joint; (2) Melanotic Spindle-celled Sarcoma and Gland. Dr. Taylor showed a card specimen of Intestinal Obstruction resulting from adhesion of the ileum to the mesentery. Dr. Savage showed, for Dr. Strahan of Northampton, Symmetrical Tumours of the Dura Mater, and Atrophy of one Lateral Lobe of the Cerebellum. Mr. Watson Cheyne demonstrated some Tubercle Bacilli. Dr. Abercrombie exhibited a Heart showing complete atresia of the right ventricle. A Cancer of the Pancreas, with secondary affection of nearly all the viscera, was exhibited by Dr. Percy Kidd. Two recent specimens were also shown: (1) a Syphilitic Intestine, by Mr. Victor Horsley; (2) Laryngeal Phthisis, by Dr. Morison.

CLINICAL SOCIETY OF LONDON.

Removal of Pin from Larynx by Internal Operation.—Scarlatiniform Rash in Enteric Fever.—Scoliosis.—Tabetic Arthropathy.

THE ordinary meeting of this Society was held on Friday, April 13th, Dr. Andrew Clark, President, in the chair. Four papers were read. Mr. Barker showed a man on whom he had performed subperiosteal amputation at the hip-joint, and Mr. Clutton showed a case of cure of spina bifida.

Dr. FELIX SEMON related a case of Removal by Internal Operation of a Pin from the Larynx of a boy, in which it had been impacted thirteen months, and had caused fixation of the left crico-arytenoid articulation. A boy aged thirteen had in his mouth one day in November, 1881, a pin, which slipped headforemost into the larynx. The symptoms were not at first urgent, but subsequently became severe. Free intervals varied with more or less acute inflammatory exacerbations, manifested by pain, inability to swallow solids, spasmodic cough, and finally even attacks of dyspnœa. It had been supposed all the time that the pin had been impacted in the pharynx and gullet, as its point was felt by Mr. Sydney Jones, under whose care the boy was admitted to St. Thomas's Hospital, on the left side of the pharynx, about the level of the cricoid cartilage, on digital exploration; but laryngoscopic examination revealed that it was for by far the greater part of its length impacted in the larynx, and that only its point, having from within perforated the left ary-epiglottic ligament close to the base of the left arytenoid cartilage, appeared in the œsophagus. The laryngoscope further showed that there was considerable thickening of all the tissues in the upper left of the larynx, that the left arytenoid cartilage was apparently anchylosed, and remained with the left vocal cord immovable in the position of phonation during inspiration. Yet there was neither constant dyspnœa nor impairment of voice. Mr. Jones kindly transferred the case to Dr. Semon, who, after preliminary removal of the greatly enlarged tonsils, and after a few days' practice with laryngeal probes, to accustom the patient to the introduction of instruments, succeeded in seizing, under the guidance of the laryngeal mirror, the projected point of the pin with serrated laryngeal forceps and pulling the pin through the tissues. Great force had to be used in the act of extraction, but the operation was almost painless and bloodless. The pin was found to measure an inch and a quarter in length. No reaction followed, and the boy was dismissed cured from St. Thomas's Hospital five days after the operation. When seen again on April 13th, it was ascertained that the mobility of the left half of the larynx had considerably improved. Amongst the points of interest in the case, Dr. Semon mentioned especially (1) the rarity of successful removal of foreign bodies from the larynx by internal operation after so long an impaction and without previous tracheotomy; (2) the corroboration which this case lent to his former statement concerning the actual occurrence of a non-suppurative, adhesive form of laryngeal perichondritis; (3) the mechanical impairment of the function of the crico-arytenoid joint; and (4) the remarkable absence of all subjective signs, respiratory as well as phonatory, in spite of the complete immobility of the left half of the larynx and its diagnostic importance. The boy and two other patients suffering from anchylosis of the crico-arytenoid articulation were shown to the Society.

Dr. WHIPHAM related the particulars of two cases lately under his care in St. George's Hospital in which an Eruption resembling that of Scarlatina occurred. The first was in a cabman, aged thirty-six, who had been addicted to drink, but who for twelve months previously to his admission had been a teetotaller. The fever symptoms had commenced fourteen days before, but the bowels had been regular and the motions natural. On admission the man complained of sore throat and headache, and had a bright erythematous eruption on the trunk, legs, and arms. The right tonsil was much swollen. His tongue was thickly coated, his pulse 128, and his temperature nearly 105°. Next day the eruption was more marked on the arms and legs, and had extended to the feet. On the third day after admission the patient became very restless and delirious, and the bowels, which had been up to this date obstinately constipated, were opened freely by a purge. The diarrhœa thus set up, though somewhat moderated towards the last, continued more or less up to the time of the man's death—i.e., four days after his admission. No typhoid eruption was present. At the autopsy extensive ulceration of Peyer's patches was found. The second case was that of a child, aged four, who was received into hospital on Oct. 6th, 1882. He had already suffered from scarlatina, measles, and whooping-cough. Feverish symptoms manifested themselves on the day before his admission, and when he came under observation his temperature was 104·2°, pulse 120. His tongue was red at the tip and edges, and the papillæ protruded from a central white coat. On the day after his admission a red eruption was noticed on the child's legs, and he was therefore isolated. Next day the erythema had greatly extended and was very brilliant, the tonsils were red and swollen. The bowels were constipated. On October 10th (four days after admission) the eruption had faded considerably. The bowels remained inactive and a purge of Carlsbad salt was administered, which acted freely. On the 11th the red eruption had disappeared. On the 13th the temperature reached 105°, and the pulse 132; the child was delirious and had fits of screaming. The bowels acted once after castor oil, the motion being partly formed, and of a clay colour. On October 17th characteristic spots of enteric fever appeared, but there was not now nor at any time any desquamation. From this date the symptoms were clearly those of enteric fever, and the child died on the nineteenth day after admission. The post-mortem examination revealed extensive ulceration of Peyer's patches and great swelling of the mesenteric glands. Mr. John Harley, in Med. Chir. TRANS., vol. lv., gives twenty-eight cases in which scarlatina was accompanied by swelling of Peyer's patches, but in only two of which ulceration was found, and also a second series of six cases in which scarlatina

preceded enteric fever, and further narrates three cases of "mixed scarlet and enteric fever." He also quotes two similar cases recorded by M. Forget. Dr. Murchison says that in many cases of enteric fever the characteristic eruption is preceded by a delicate scarlet rash, and adds that "this is not peculiar to enteric fever but occurs in other forms of pyrexia." Sir W. Jenner, speaking of a red rash in enteric fever, says that the disease was mistaken for scarlatina. Dr. Whipham stated that he had lately seen a case of variola which was preceded by erythema of the abdomen and thighs. The question was, Were these really cases of double poisoning, of mixed scarlet and enteric fevers? The absence of desquamation and the fact that an erythematous eruption is not uncommon in variola, pyæmia, and other forms of pyrexia, led to the conclusion that they were really instances of enteric fever preceded by erythema, and not mixed cases of scarlatina and enteric fever. The lungs were intensely congested. Death was due entirely to the enteric fever in both cases.—Dr. MAHOMED was quite familiar with a roseolous rash in the early stage of typhoid fever. He had seen it several times. A case was brought to the Fever Hospital with a certificate of scarlet fever. She was in the scarlet fever ward from five to six days, and she then had a very severe attack of scarlet fever. While in the ward she had pyrexia and diarrhœa. She died, and at the autopsy she showed all the signs of advanced typhoid fever. Recently he saw cases of the same kind. One was a patient under Dr. Taylor's care in the third week of typhoid fever, with a rash exactly like that of scarlatina. The rash was not followed by a marked desquamation. He thought there were four rashes in typhoid fever, roseola, rose spots, taches bleuâtres, and miliaria. He had not seen a similar erythematous rash in any case of typhus fever.—Dr. CAVAFY thought the paper raised the question of the occurrence of roseolous rashes quite apart from scarlatina as from drugs, or after slight surgical operations, in the puerperal condition—uterine erythema, and in connexion with menstruation. It would be useful to discover some band of connexion between all these conditions. This he thought must be some irritation of the nervous system leading to paralysis of the vaso-motor nerves. He asked whether it was possible to diagnose these cases from true scarlatina. He referred to a case taking salicylate of soda who had sore-throat, and a bright punctate rash with circumscribed erythematous patches which became herpetic vesicles; desquamation was very free. Desquamation must not decide the question, for this might occur also in the quinine eruption. He thought the question of diagnosis was at times impossible without further information.—Dr. ANDREW CLARK said he was sure that the nervous system was operative in causing erythematous eruptions. Thus, in baring the chest of a nervous patient for examination, an erythema frequently occurs, which is often followed by desquamation. He was familiar with erythema occurring in the course of typhoid fever, and always in anomalous cases, in which the nervous system was much affected.—Mr. BROADBENT was only familiar with the delicate roseolar rash, described by Murchison as occurring in typhoid fever, which could not be confused with scarlatina. He had no doubt of the concurrence of typhoid fever and scarlatina. He thought Dr. Whipham's second case was one of scarlatina, immediately preceding enteric. He referred to the case of a man with loss of general nerve tone, in whom, whenever he stripped, an intense erythema spread over the whole chest, abdomen, and back, fading in patches, and associated with taches cérébrales and fibrillar contraction.—Dr. CLARK added, that some indications of the nervous erythema or doctor's rash may remain for thirty-six hours.—Mr. H. PAGE said erythema was seen at the onset of acute rheumatism, and at the commencement of variola. He also mentioned a case of intense scarlatiniform rash preceding chicken-pox; and he agreed with Dr. Cavafy in ascribing it to a nervous origin.—Dr. WHIPHAM thought that Dr. Cavafy had raised the chief difficulty in these cases in reference to the question of isolation. He had, perhaps, laid too much stress on the point of desquamation, but it was remarkable that in the boy there was no desquamation in nineteen days after an intense erythema.

Mr. BERNARD ROTH showed a case of Lateral Curvature of the Spine, illustrating its Treatment without the Use of Mechanical Supports. The following is a summary of the paper:—(1) The importance of noticing osseous deformity, if any, of the spine and ribs, and whether the patient can be at once restored to the normal position, and if not, to what extent. (2) If even slight osseous deformity be present complete cure is impossible. (3) Even severe cases of lateral curvature often have no osseous deformity, and can be at once temporarily restored to a normal position. (4) A patient with confirmed curvature, with or without osseous deformity, is so habituated to the vicious position that his attempts to improve the spine increase the deformity, unless instructed by the surgeon. (5) Exercises of the spinal muscles with or without resistance by the surgeon while the patient is in the improved position are absolutely necessary. (6) Good positions should be assumed at all times, especially in sitting, by means of suitable chairs. (7) Moderate walking is beneficial. (8) Lying prone or supine is not curative, as the spinal muscles are not strengthened by it. (9) All spinal supports, where the patient can by an effort maintain an improved position of the spine, even for a few seconds, are injurious or useless. (10) Swinging by the head does not strengthen the spinal muscles. (11) By avoiding all vicious positions, by good ones being shown and maintained, and suitably prescribed exercises carefully practised, better and quicker results are obtained than by any other treatment hitherto proposed. Mr. Roth illustrated his remarks by reference to the case of a female student at the London Academy of Music, aged eighteen, who consulted him on March 4th, 1882. Up to four years ago she was strong and well, then, without any apparent cause, she began to stoop and have backaches. Becoming gradually worse a surgeon examined the spine, and finding curvature ordered the patient to lie down for two hours daily. At the end of a year, as the patient became worse, an ordinary steel support with arm crutches was ordered. This had been worn for two years when she consulted Mr. Roth, the patient having become more deformed and suffering more. On examination the patient presented confirmed lateral curvature, the whole spine being convex to the left, the right scapula more than two inches below the left, with considerable exaggeration of the cervico-dorsal antero-posterior convexity, causing poking of the head, flat chest anteriorly, and undue prominence of the abdomen. There was slight permanent rotation to the left of the lumbar vertebræ, and slight increase of the convexity of the left ribs posteriorly. She could be placed in an almost normal position, and maintain it by a great effort for a few seconds. The spinal support was ordered to be left off completely, and a few simple exercises shown. On Dec. 8th he found the state of the spine unaltered from the first visit. Mr. Roth maintained that no instrument yet invented can put or keep a patient in the improved position shown in the three photographs exhibited. On Dec. 23rd the patient began daily treatment. On Jan. 13th she passed the whole day without backache for the first time for two years, and on January 16th the dressmaker had to widen her dress five inches across the chest. On examining the back, the habitual position was found decidedly less deformed than on Dec. 20th. Her appetite was much better, especially at breakfast. Since Jan. 20th the patient has been practising a prescription of which the "keynote" is a position with the right arm directed upwards, the left arm outwards, while the spine is rotated to the right and slightly flexed laterally to the left. The patient has continued to improve up to the present time, and there was reason to expect a practical cure at the end of three months' treatment. Measurements of the arcs of the different curves in a case of lateral curvature the author thought very misleading if a note be not also taken of the improvement which can be effected by the patient's voluntary effort properly directed by the surgeon. Lastly, rough-and-ready gymnastic treatment, such as advising a patient to swing on a trapeze with one hand higher than the other, or to use a skipping-rope, is not to be compared in efficiency with systematic localised exercises (medical gymnastics), while the patient is placed in the improved position. The latter continued, with attention to the avoidance of all injurious positions during the day, constitute the most successful and rapid treatment of lateral spinal curvature.

Mr. HERBERT PAGE related a case of Tabetic Arthropathy in which the Tarsal Bones of both Feet were involved. This case was originally shown in the museum for living specimens at the International Medical Congress. The patient was a man, aged thirty, who, in October, 1880, began to have swelling of his right leg and ankle. The foot gradually increased in size, and when first seen in February, 1881, there was great enlargement in the region of the tarsal bones, which were freely movable on one another in any

direction. A month later, broken corns appeared on the sole, with an ulcer on the big toe. These sores were absolutely painless; as, indeed, was manipulation of his foot; a circumstance which led to the discovery that the patient was the subject of tabes dorsalis, the knee-jerk being absent, and the pupils presenting the "Argyll-Robertson phenomenon." There was no ataxia in gait. While under observation the left foot became affected in a similar way to the right, very rapidly and without pain. Four years previously he had severe lightning pains down the limbs, and two years before he had an illness called "nervous debility," of which the most noticeable feature was profuse vomiting every day for nine months; which began and ended quite suddenly without known cause as to its origin or its termination—a true gastric crisis. Attacks of a similar kind have occurred since the patient has been under the author's observation, and each of them has begun with a severe rigor, and been marked by the passage of large quantities of blood in the urine, associated, at the same time, with profuse vomiting, diarrhœa, and increased lightning pains. The patient has now been free from these attacks for some months, and the swelling of the feet has subsided. The feet, however, are strangely deformed, owing to an alteration in the relative position of the affected bones. The other symptoms of tabes dorsalis remain the same, but there is still no ataxia. Only one instance of this particular form of arthropathy had been seen by M. Charcot. Though rare, it had, however, many features in common with the arthropathies affecting the larger joints. One foot of his patient would in all probability have been removed—so bad was it—had not the cause of the affection been accidentally revealed by the symptoms. The arthropathy has subsided, however, and left a useful, though deformed, limb. The occurrence of attacks of paroxysmal hæmaturia was a striking feature in this case, and the association thereof with the other symptoms of a crisis seemed to indicate that it was not less a symptom of the disease than the vomiting, the diarrhœa, and the joint affections. The history may suggest a new line of observation, and inquiry in the study of these cases of paroxysmal hæmaturia or hæmaturinuria.—Dr. ALTHAUS protested against the expression "tabetic"; the adjective should be "tabid"; it was important to be correct in a term which was likely to be much used.—Dr. BUZZARD said the case was very interesting from many points of view, one of which was the occurrence of attacks of paroxysmal hæmaturia. He had never met with any similar case. But might it not happen that cases of so-called paroxysmal hæmaturia were really cases of tabes dorsalis, in which this one symptom masked all the others? He was also interested in the association of gastric crises with this arthritic condition. This association he had observed in a large number of cases. He referred to one of these cases lately recorded in our columns, in which there was a healed perforating ulcer of the foot. He had lately met with another form of trophic disorder, an ecchymosis under the big toe-nail without any injury, leading to shedding of the nail.—Dr. MAHOMED said he had under his care a patient with locomotor ataxy who had polyuria, he had been passing 106 ounces per diem, specific gravity 1004; this was evidence of renal neurosis.—Mr. PAGE said he had recently read a thesis on spontaneous fall of toe-nails, and changes in their shape occurring in "tabid" cases. "Nephritic crisis" had been applied to attacks of extreme colicky pains in the kidney in a case of locomotor ataxy, associated with entire suppression of urine with great albuminuria between the attacks. It was easy to see that from the attacks of hæmaturia coming on with a rigor the true nature of such a case might be entirely overlooked, and its origin attributed to cold.

OBSTETRICAL SOCIETY OF LONDON.

A MEETING of this Society was held on Wednesday, April 4th, Dr. Gervis, President, in the chair.

Knotting of Umbilical Cord.—Dr. GODSON exhibited a four months' fœtus with placenta, showing a knot in the umbilical cord, with atrophy of the cord on either side of it, leading, he believed, to the death of the fœtus.

Dermoid Cyst.—Dr. EDIS exhibited a dermoid cyst removed by him. It was so extensively adherent that it was difficult to determine whence it had sprung. Both ovaries and broad ligaments were removed with it. The patient recovered.

Hernia of a Uterine Fibro-Myoma.—Mr. KNOWSLEY THORNTON exhibited a uterine fibro-myomatous tumour weighing 11½ lb., removed by him. The abdomen had been opened some years previously, but the operator, finding the tumour uterine, closed the wound. A hernia of the tumour resulted; it became adherent, ulcerated, and bled. Mr. Thornton removed it with the uterine appendages. The tumour was of the soft kind, and, he thought, might have been cured by removal of the uterine appendages; but it was impossible to close the wound without removing the uterus. He believed the case unique. The patient was doing well.

Axis-traction Vulsellum Forceps.—Dr. ROBERT BARNES showed a sessile submucous fibro-myoma and a new axis-traction vulsellum forceps which he had devised and used for its removal. By this instrument the tumour was dragged within reach without undue or misdirected force, and room was left for manipulation in front. He thought this application of the principle of Tarnier's forceps would prove of great value.—Dr. AVELING had invented and published forceps of the form permitting axis-traction ten years before Tarnier's forceps of the same form was made known.—Dr. HEYWOOD SMITH suggested that his forceps would be better if the blades were made separable.

Cyst and Tumour of Placenta.—Mr. MARK (for Dr. JOHN WILLIAMS) exhibited a Placenta having on its fœtal aspect a cyst the size of a Tangerine orange, at the base of which was a tumour, apparently fibrous, the size of an almond.

On the "Pressure of the Femora" and its influence on the Shape of the Pelvis.—This paper, by Dr. CHAMPNEYS, was then read. After a brief review of the history of pelvic literature, special mention was made of the study of the fœtal pelvis by Fehling, which showed that many characters previously supposed to be the result of the operation of mechanical influences after birth were really congenital and antecedent in date to the operation of such influences. The same applied to the rickety fœtal pelvis. It followed from this that the scope of mechanical influences as hitherto accepted had to be reconsidered. In considering the influence of the "pressure of the femora" fallacies were pointed out, and all possible sources for this pressure were reviewed. These included:—1. Passive resistances: (*a*) bones, (*b*) ligaments, (*c*) couples. 2. Active operations: (*a*) action of muscles. These were in turn scrutinised, and the conclusion reached that "the action of the muscles joining the femur and the pelvis is a true cause of the 'inward pressure of the femora,' and is aided by the muscles favouring inversion of the foot." A corollary followed, "that use of the lower limbs will increase the inward 'pressure of the femora.'" In unsymmetrical pelves, and pelves in which the acetabula are within the line of the body-weight, other consequences followed. These were illustrated by three figures. The phrase "increased pressure on the overweighted side" was shown to include many different factors.—Dr. ROBERT BARNES suggested that one factor in producing flattening of the rickety fœtal pelvis might be pressure from the attitude of the fœtus with the thighs doubled up.—Dr. MATTHEWS DUNCAN agreed with the paper in the main. Dr. Champneys had given a valuable sketch of the history of the subject, and his special study of the action of femora as a result of body-weight and muscular force made the paper a great contribution to pelvic literature. He (Dr. Duncan) would not give muscular action a paramount position, and for that still vindicated the great force of body-weight.—Dr. AVELING drew attention to a pelvis in the Society's museum, the shape of which was normal, although congenital dislocation of the hip was present.—Mr. DORAN thought muscular action in the fœtus was a force too slight and intermittent to be capable of altering the shape of cartilaginous bones.—Dr. CHAMPNEYS agreed that gravity was the most powerful of the forces acting on the pelvis. Although the action of mechanics might have been pressed too far, it was impossible, in the face of the malacosteon pelvis, to upset it. He did not think that the fœtal attitude was capable of flattening the fœtal pelvis, for the fœtus floated in fluid, and therefore was not exposed to any inequality of pressure, and its attitude was not for it one of constraint.

Case of Labour with Atresia Vaginæ.—This paper, by Dr. FANCOURT BARNES, was then read. The patient was aged twenty-one, pregnant for the first time. The vagina was represented by a cul-de-sac, about one and a half inches deep, at the bottom of which was a pinhole aperture, the orifice of a canal of no larger dimensions leading into the uterus. This canal traversed about two inches of tissue before reaching the uterine cavity. The patient was anæs-

thetised, the canal stretched with a Priestley's dilator, then incised on each side with Simpson's metrotome, and still further enlarged by laceration with the finger. Delivery was then accomplished with Barnes's forceps, it being found impracticable to apply Tarnier's. The operation lasted an hour, and was performed under carbolic spray. Mother and child did well.

The report of the committee upon the specimen shown by Dr. Wynn Williams at the last meeting was read; it was to the effect that the tumour was a submucous fibroid.

Reviews and Notices of Books.

The Voyage of H.M.S. "Challenger." Zoology, Vol. IV. Prepared under the Superintendence of the late Sir C. WYVILLE THOMSON, and now of JOHN MURRAY. Longmans and Co. 1882.

[FIRST NOTICE.]

THIS volume commences with a brief account of the life and labours of Sir Charles W. Thomson, who, though he had attained to very high eminence for his scientific work, died at the early age of fifty-two. He was elected to fill the chair of Botany in Aberdeen at a time when most men are still engaged in learning the rudiments of their profession; at twenty-three he went to Cork as Professor of Natural History; in 1854, when still under twenty-five years of age, he was appointed Professor of Mineralogy and Geology in Belfast, and shortly after Professor of Natural Science. He took part in the *Porcupine* and *Lightning* expeditions, and subsequently was the head of the *Challenger* expedition, on his return from which, in 1876, he was knighted. He received many honours from home and foreign Societies, and after a severe illness in the summer of 1879, died at Bonsyde, near Linlithgow, in 1882. A list of upwards of forty of his principal publications is appended to the memoir.

The contents of this volume are: (1) A Report on the Anatomy of the Petrels (Tubinares), by W. A. Forbes. (2) Report on the Deep Sea Medusæ dredged during the voyage, by Ernest Haeckel. And (3) Report on the Holothurioidea, Part I., by Hjalmar Théel.

The account of the petrels, by Mr. Forbes, whose long silence since his arrival in Western Africa is beginning to cause much anxiety to his friends, contains much new information, for, as the author observes, the group of petrels has scarcely been examined anatomically, partly owing to their rarity, and partly to their peculiar habits, which prevent their being readily obtained, either dead or alive. The majority of the group inhabit the little-visited oceans and islands of the Southern hemisphere, and are only known from skins or skeletons, the great size of many of them rendering it impracticable for any ordinary collector to bring their bodies home. Professor A. H. Garrod, who, at the time when the organisation of the *Challenger* expedition was being completed, was Prosector of the Zoological Society, recommended that special attention should be paid by the staff of naturalists to the formation of a collection in spirit of these oceanic birds, and though he unfortunately did not live to investigate their structure, a very large collection of these birds has been obtained, and their examination and description have fallen into good hands. Mr. Forbes appears to have had seventy-four specimens, belonging to twenty-two different genera, for examination, and has aimed, not at giving a detailed description of the structure of any particular petrel, but at describing the most important deviations from the ordinary Avian type, and to compare the members of it with each other and with other groups of birds in those points of their structure in which experience has shown birds to differ from each other.

The order Tubinares derives its name from the peculiar prolongation of the external nares into a cylindrical tube lying on the dorsal surface of the beak, and opening by one or two apertures. In the Oceanitidæ and smaller species of Procellariidæ, the nasal tubes quite coalesce, in the former presenting a circular aperture with scarcely any median septum, when looked at in front, whilst in the Procellarian genera it is oval and distinctly double. The legs are always bare of feathers for some distance above the tarsal joint, and the scutellation of the tarsi presents minor peculiarities in the two sub-orders. The hallux is always small, and quite absent in Pelecanoides. The pterylosis, or disposition of the feathers, seems to be on the whole very uniform. The ordinary number of the rectrices is twelve, though in Ossifraga there are sixteen. The number of primary remiges is always ten, but that of the secondaries varies. The form and arrangement of the stomach and intestines present several peculiarities, and are very similar throughout the group. The mucous membrane of the palate presents several longitudinal rows of pointed retroverted papillæ. The palate is cleft for about half its length by a narrow median fissure, fringed with small spines, and dilating behind into the opening of the posterior nares, and behind this is the linear opening of the Eustachian tubes. From the fore part of the median fissure a sharp median ridge runs forward with four or five strong conical spines on its posterior part. Other spines are found on the sides of the palate. The tongue is sometimes, as in Ossifraga, of considerable size, and more or less covered with spines, the œsophagus capacious and distensile, but without a crop. The proventriculus is very large, reaching nearly to the posterior extremity of the abdominal cavity, and lying to the left side of the stomach and the mass of intestines; it opens by a slight aperture into the stomach or gizzard. This is small, globular, and muscular; it was nearly always found full of the horny beaks of Cephalopoda. The duodenum presents a peculiar upward curve to the right. The intestinal cæca are absent in the Oceanitidæ, but present, though small, in Procellariidæ. Mr. Forbes mentions and illustrates many peculiarities of the myology of these groups. The pectoralis primus is very large and divisible into two layers, as in many of the storks; the other pectorales are large, as might be anticipated from the powers of flight possessed by these birds. The biceps are small and peculiarly modified, the coracoid head alone forming the muscle proper, the humeral head going entirely to the tensor patagii longus tendon. The deltoid and glutei muscles are short and small. The tensor patagii brevis and longus are specially modified in the different species. Mr. Forbes gives a careful description of the different forms of the trachea and syrinx in the different species, the peculiarities being illustrated by many woodcuts. A short description is given of the osteology. He entirely agrees with the propriety of Professor Garrod's division of the entire order of Tubinares into two main families of Oceanitidæ and Procellariidæ, the distinctive features of which he carefully sums up. This report is illustrated by seven plates representing respectively the beak and feet, the alimentary canal, the muscles (three plates), the skull, and shoulder girdle, all excellently drawn.

The Diseases of the Prostate; their Pathology and Treatment. Comprising the Jacksonian Prize Essay for the year 1860. By Sir HENRY THOMPSON, Surgeon Extraordinary to H.M. the King of the Belgians, &c. Fifth Edition. London: J. and A. Churchill. 1883.

THE result of Sir Henry Thompson's experiment in the publication of the last edition of his Clinical Lectures in a cheap form has been such that when a new edition of his work on Diseases of the Prostate was called for, he determined to issue it in the same cheap form, at one-fourth of its former price. The work has been thoroughly revised, and the results of the author's more recent experience have been incorporated in it. The most notable addition is a chapter in which two operations for the relief

of cases of Prostatic Hypertrophy, with very irritable and contracted bladder, necessitating the very frequent use of the catheter, are described. These operations are opening the bladder above the pubes, and opening into the membranous urethra in the perineum. Sir Henry Thompson now practises the latter operation, and speaks very highly of the excellent results it has yielded in his hands in this very troublesome and painful form of disease. The last chapter, on the Relation between Hypertrophied Prostate and Stone in the Bladder, is considerably modified; far less than formerly is said about the treatment of phosphatic concretions by solvents, "so greatly has the mechanical process of removing calculous matter in any form been improved." In the previous edition of 1868 Clover's bottle is described, and as the result of using it "not less than two hundred times," Sir Henry Thompson states that "it is necessary to use all such apparatus with extreme gentleness, and I prefer to do without it if possible, as its employment is quite as irritating as a sitting with the lithotrite. Repeated injections, which alter rapidly and considerably the size of the bladder, are always irritating to that organ." Now (1883) we read that Bigelow's operation "has been proved the most successful operation ever practised in dealing with very large and hard formations." It is interesting to read in the 1868 edition the following piece of advice in relation to Clover's bottle: "It is scarcely necessary to remark that before using this instrument on the living subject, it is desirable to practise with it by extracting stone or coal from a basin of water." Why has this piece of wise counsel been withdrawn from the present edition? We do not find in this cheap edition all the beautiful engravings of hypertrophied prostates that appeared in the former editions, but there are some new woodcuts which perhaps are more useful.

SANITARY CONDITION OF CALCUTTA.

WE regret to observe that the zeal which was manifested when the disgraceful state of the sewers in Calcutta was brought prominently to notice by the editor of the *Englishman* has taken a wrong direction, and that the Municipal Commissioners and Sanitary Committee appear to have devoted their energies to discussing the alleged shortcomings on the part of their subordinates—to have, in fact, spent their time in fighting over the question "Whom shall we hang?" to the neglect of the far more important one, "What shall we do to ensure a healthy condition of our great city?" We do not underrate the importance of ascertaining the facts as to the tampering with the sewers in order to conceal the neglect of the officials, and of punishing any persons who may be convicted of having been guilty of such misconduct; but this could be more effectually done by a skilled police magistrate than by either of the two public bodies referred to, and they would be thus left free to devote themselves to the more legitimate object of considering the best measures to be adopted for sanitary improvement. The neglect of the constituted authorities to take action in this direction appears to have excited a strong feeling of indignation in Calcutta, for towards the end of February a petition bearing the signatures of a large number of the highest officials and of the leading merchants was presented to the Lieutenant-Governor of Bengal. The petitioners brought to his notice the failure of the Municipal Commissioners "to make adequate and suitable provision for the cleaning and conservancy of the town," the statement being supported by "facts gathered exclusively from official reports," and they prayed the appointment of a committee under the provisions of Act IV. of 1876, "with instructions to report, within a fixed time, specifying any further provision for cleaning and conservancy of the town which they consider necessary," and that His Honour should order such provision to be carried out. The Lieutenant-Governor has referred the petition to the Chairman of the Corporation, that the Commissioners may have an opportunity of submitting any reply to it which they may desire to offer, and has at the same time called upon them for certain returns bearing upon the subject. From the high standing of the petitioners, and the strong case they have submitted, we have no doubt the subject will receive prompt attention, and a searching investigation on the part of the Government. Unsatisfactory, with reference to the public health, as the state of the sewers was shown to be towards the end of December, the petition now presented brings to notice a far more alarming state of affairs as regards the general sanitary condition of Calcutta. It bears out the statements previously made respecting the mortality from cholera in 1882, and the increase in the general death-rate, amounting to 2½ per 1000 upon the average of the preceding ten years. It adduces several instances, from the official reports of the health officer, showing the horrible condition of the "bustees," or native villages, and of the tanks. We cannot afford space for these details, but the following extracts may suffice to show the importance of the statements. The Chairman of the Municipal Commissioners, in a memorandum dated so late as Dec. 30th, 1882, in speaking of "bustees" spread over the north and east of the town, says, "Here the soil is, without hyperbole, saturated with pollution; earthen drains abound, which have no flow, often no exit, and which are literally elongated cesspools; refuse is never removed from one year's end to the other; privies are to be seen of the worst description reeking with filth, which defy any ordinary means of cleansing; the numerous tanks are largely filled with the subsoil sewage, which oozes out from this polluted soil. In such places one wonders not that the mortality is such as it is, but that life can be lived in such an atmosphere." With regard to the state of the tanks and wells, "An official investigation of two hundred Calcutta wells and tanks last year showed that 44 per cent. were pure sewage, 22 per cent. were diluted sewage, 9 per cent. were dirty water, and 4 or 5 per cent. were 'moderately safe.' A good average quality of Calcutta tank water," says the Government analyst, "may be made by mixing six parts of our present hydrant water with one or two parts of concentrated Calcutta sewage." This state of affairs, it must be remembered, has been periodically brought to the knowledge of the Sanitary Committee by the health officer, and some steps have been taken in the way of improvement. But the petitioners complain that these have been far from commensurate with the requirements of the case or with the powers vested in the Commissioners for that purpose, and that the Commissioners do not appear to realise the necessity for prompt and effective action. Of 534 tanks which it was shown in 1879 "might be eventually filled up," 500 are still left untouched, and the opinion of the Commissioners on the subject of this responsible duty may be estimated by their statement that, "though the out turn compared with the entire number of tanks appears small, tank filling is really keeping pace with other improvements; and if another 100 of the worst are filled up in the course of the next five or six years, there will not be many tanks left that are serious nuisances." We are not surprised that the petitioners have taken up the question of sanitary improvement as they have done; our only astonishment is that they have not applied the pressure of public opinion sooner, and that they have so long neglected their duty to themselves and to the poor of Calcutta. We trust that the Lieutenant-Governor will lose no time in pressing forward the measures which may be deemed necessary in the interest of the public. We fully concur with the petitioners when they point out as of national importance "that it should not be supposed that the Government acquiesce in a discharge of the municipal duties by the Commissioners, against the inadequacy of which the health officers have for so many years protested, and which seems in so many serious particulars to fall far short of the requirements of the case."

HOSPITAL FOR SICK CHILDREN.—Sir Michael Hicks-Beach presided on the 11th inst. at the anniversary festival of this hospital, and, in the course of a speech recommending the institution to public support, described the effect produced upon himself by a visit to the hospital, and bore testimony to the admirable manner in which it is conducted. It appears that during the past year over 1000 children were treated within the wards of the hospital, and 13,000 received its benefits as out-patients. Funds are needed for an extension of the institution, and subscriptions to the amount of £1000 were announced.

THE LANCET.

LONDON: SATURDAY, APRIL 21, 1883.

"FIVE years ago, one of my predecessors in office," said the Lord Mayor at the Egyptian Hall on the 13th inst., "standing where I now stand, asked the citizens of London to contribute £100,000 to the London Hospital; and to-day I have to beg for the same institution, and to ask you to give £150,000 to enable its Committee to carry on the work for the next five years." These words fairly startled the audience assembled in the Mansion House; and well they might, for the words mean, if they mean anything, that five years hence a future Lord Mayor will be asking an audience assembled in the same place for £225,000 more—not to form an endowment fund, not to erect new buildings, nor to enlarge the field of labour, but to pay the management and maintenance expenses during the ensuing five years. Put briefly, the Committee of the London Hospital propose to live mainly on faith—that is to say, they have decided to go on affording the vast amount of gratuitous medical relief represented by a statement in the appeal circulated at the meeting, to the effect that "the work of the past year exceeds the work ever done in any hospital in Great Britain." To accomplish this the Committee voluntarily incur a debt which at present amounts in five years to a sum equal to about half the income of the whole of the metropolitan general hospitals, and which will exceed their total income if the present system of financing the London Hospital is continued for ten years longer, assuming of course that the Lord Mayor's figures are correct. No wonder, then, that the senior physician, Dr. ANDREW CLARK, commenced his speech in support of the appeal by declaring: "I do not understand why the London Hospital has fallen into so sad a position of financial failure as to need to come and beg for £150,000 from the public. There must be something wrong somewhere, but I cannot explain where." Agreeing as we do most cordially with this sentiment, we will endeavour to show where the fault lies, and how this appalling failure in hospital finance has occurred.

We admit the truth of Dr. ANDREW CLARK'S declaration, that the internal and domestic management of the London Hospital is excellent; that its medical school is deservedly and increasingly popular; that the individual members of the general and medical committees equal, if they do not surpass, those of any hospital in their devotion to duty, and in their honest endeavour to do their utmost to relieve the mass of suffering and disease for which they desire to provide. Seeing all this, we have learnt how the existing crisis has been brought about. Everybody connected with the London Hospital has lost sight of practically all but one side of its work, by becoming unconsciously absorbed in the feeling that funds will come from somewhere, and that all that has to be done is to give relief to an unexampled amount of suffering and misery occurring, as was frequently stated at the meeting, in a population of upwards of 1,000,000 souls, "closely packed together in recesses of filth and squalor, engaged in occupations dangerous to health and hazardous to life and limb, working in unhealthy and unwholesome factories by day, and sleeping in still more stifling and pestilential homes at night." Hence, the London Hospital has to minister to a "feeble, unhealthy, and perilous population, inhabiting districts absolutely repugnant to physical and moral health, and producing children who suffer from their very birth from want of food and fresh air." This is the picture painted by Lord SHAFTESBURY, dwelt upon by other speakers, and firmly believed in by the managers of the London Hospital. That it contains much truth, we are not prepared to deny, but an actual inspection of the homes of the poor in the East and West-ends of London compels us to point out in the interests of truth, and of the poor people themselves, that there is much exaggeration in the statement when it is applied to the whole of the 1,000,000 inhabitants of East London. Besides, as a matter of fact, there is undoubtedly as much, if not more, misery to be found amongst the poor in the West and other districts as in the East district of London. It follows therefore that "the something wrong" is undoubtedly to be found in the omission of the London Hospital authorities to realise that East London is not all squalor, poverty, disease, and death, but that it contains a large population of exceptionally thrifty and prosperous tradespeople and householders, in addition to a good proportion of large employers of labour, and of well-to-do members of the artisan class. We do not deny that there is much poverty and squalor, but we do most emphatically deny that it is so vastly out of proportion to the other classes of population as to place the East-end in the unfortunate position, as compared with other centres of population, that nine-tenths of the funds required to provide its poor with hospital accommodation must be supplied by the residents of other districts.

What, then, is the remedy for this quinquennial and increasing deficiency at the London Hospital which, beginning with thousands, and increasing to tens of thousands, soon threatens to amount to hundreds of thousands of pounds? In a word, that the managers shall at last open their eyes to the actual facts, and look at the question all round, and not from one side only. That this is necessary is proved by the following extract from a letter written by the Rev. S. A. BARNETT, rector of St. Jude's, Whitechapel, which appeared in *The Times* five years ago, but which was not heeded at the time, and hence the present deficiency of £150,000. We say hence, because the number of patients receiving free medical relief has increased in the interval from less than 52,000 to nearly 70,000. Mr. BARNETT writes of an attempt to found a Provident Dispensary:—

"Last year we drew up rules and a scale of fees. The doctors best known in the neighbourhood agreed to be on the staff, and a collector has been employed. Everyone has worked well, but as yet the scheme is not a success. The cause of failure is the facility with which the working people can get attendance at the London Hospital and Free Dispensaries. It is hopeless to expect that they will put aside, even a penny a week for medicine and a doctor's attendance, when they can obtain as much for the mere asking. As long, therefore, as the hospitals give their relief so freely and indiscriminately, we must expect that

the people will use this 'stepping-stone to pauperism' and be deprived of that 'happiest of results, the healthy feeling of self-help and independence,' which belongs to those who do their duty in providing for the necessities of life."

Mr. BARNETT is quite right. How can a people reared under such a system be expected to help themselves? How can the managers of the London Hospital expect that the medical profession as a body will support their appeals for funds to the injury of the practice of their brethren in the east of London?

Again, the London Hospital Committee must be roused to the necessity of their doing what other hospital committees have to do; and that is, to set about raising the greater portion of their income from the inhabitants of their own district. How little they have recognised this principle is proved by the knowledge that the annual subscription list stands at less than £2500. One hospital we might mention receives £1500 a year from persons whose subscriptions are limited to 5*s.* each, and there are many more than 20,000 people in East London who can afford to subscribe that sum, making collectively £5000 a year. Again, the whole amount received from the *employés* of the port of London in 1882 was less than £2000, whereas the Royal Infirmary alone received upwards of £5000 from the artisans in the port of Glasgow, in addition to probably as much again given by the same class in the same year to other hospitals. These are but two sources of income which have practically been neglected in the past; and we do not hesitate to say that if this side of the question is now faced by the managers of the London Hospital, they will have comparatively little difficulty in increasing their income by at least £15,000 a year in the next five years.

In conclusion, and as the moral to what we have here written, it must be understood that we wish the London Hospital Committee all success in their present appeal; and all who can afford to do so should willingly and promptly give. On the other hand, we warn all who are concerned in the prosperity and efficiency of this institution that a change of policy must be promptly and vigorously adopted during the next five years, and the voluntary income must be increased, as it can and ought to be increased, by at least £10,000, or the Committee will not get, nor will they deserve to get, £225,000, if they have the boldness to ask for it at the end of that period.

IT was generally known that, after his retirement, Dr. FARR'S health failed so rapidly that he was soon practically lost to the field of scientific labour which he had made so peculiarly his own; and which he had graced, not only with exceptional intellectual power, but with a genial modesty which charmed all with whom he was brought into contact. His death, however, a few days since, inevitably reawakens us to a sense of the value of his statistical work, and of the great loss which was sustained when his capacity for work ceased.

It was but natural that at the meeting of the Statistical Society on Tuesday evening last his colleagues, with whom he had been so long associated, should have earnestly expressed their sense of the personal and scientific loss incurred by the death of Dr. FARR. A Fellow of the Society almost from its institution, and a liberal contributor of valuable papers to its journal, Mr. R. GIFFEN, the President, appropriately referred to him as one of the most eminent, if not the most eminent, of the Fellows of the Society. Under the circumstances, there was something not inappropriate in the Society's meeting, at such a time, to discuss a subject which Dr. FARR had made peculiarly his own, handled by one of his late colleagues in the General Register Office. The subject was the recent marked decline in the English death-rate, and its effect upon the duration of life. There appears to be little reason to doubt that much of this reduction may fairly be attributed to the improved system of sanitary organisation inaugurated by the Public Health Acts of 1872 and 1875. If, however, the causes which operated to render the passing of these Acts possible were impartially investigated, the invaluable services rendered by Dr. FARR to the improvement of public health in this country would be fully recognised. The system of mortality statistics created and developed by Dr. FARR, and utilised in the reports of the Registrar-General, may be said to have created that public appreciation of the value of public health which prepared the way for the Public Health Acts of 1872 and 1875. It was the national faith in Dr. FARR, personally, as a vital statistician that invested with so much confidence the Registrar-General's statistics, which shed so clear a light upon the black figures of our urban mortality statistics, and thus strengthened the hands of other workers in the field of sanitary reform. Dr. FARR'S share in the reduction of the English death-rate, which was discussed by the Statistical Society on Tuesday last, was never fully recognised in his lifetime, and it is to be hoped that some opportunity may yet be found of making this recognition in the only way that now remains—in memory of his services.

On Dr. FARR'S retirement, as our readers may remember, a testimonial fund was started, which it was intended to present to him as a mark of the appreciation of the value of his varied statistical labours entertained by public and private friends. The amount subscribed somewhat nearly approached £1000, but it was intimated to the Committee that it would be most consonant with Dr. FARR'S wishes on the subject if the fund were invested and allowed to accumulate during his lifetime, in order to supplement the slender provision which a till recently small official salary had enabled him to make for his three unmarried daughters. We are informed that this course was adopted, and it will now be the duty of the Committee to close the fund so soon as due opportunity has been given for non-contributors who may be disposed to assist in augmenting the fund.

We hear that it is proposed to make an application to Government to recommend a grant from the Civil List to Dr. FARR'S daughters. We earnestly hope that it may be possible to accede to the request, and cannot doubt that such a grant would be as well merited as it would be cordially endorsed as a graceful tribute to services which have never been fully recognised.

THE value of the tentative attitude of the scientific mind towards the whole subject of bacterial pathology has been at no time more apparent than at present. There is much contention, especially, in that department which deals with the attenuation of pathogenic bacteria. TOUSSAINT had shown that anthrax blood lost its virulence when treated

with carbolic acid or exposed to a temperature of 55° C.; but to PASTEUR belongs the great merit of having demonstrated that the bacilli themselves may become changed and attenuated, and, further, that the new functions which they thereby assume are capable of being transmitted. The alleged capability of the spores of certain bacilli to resist the destructive influence of various powerful agencies, although an altogether different and almost perfectly opposed notion to the one with which we are engaged at the present moment, is brought prominently before the mind, because attenuation of virus suggests a practicable way out of a practical difficulty, and at the same time an explanation is afforded which may more or less satisfy the theoretical side of the question. When we speak of the attenuation of a formed micro-organism we mean that such bacilli may become changed in respect of their physiological properties, but not in respect of their apparent morphology; and this is a principle which is fraught with important suggestions for the welfare and progress of hygienic science. It is a generalisation supported by innumerable examples that in nature the function precedes the structure. Perhaps from *a priori* reasoning we should come to the conclusion that the one is coetaneous with the other; but so far as we have yet gone, direct observation has been unable, possibly because of the imperfection of our powers of investigation, to support that notion.

KOCH has maintained, in his reply to PASTEUR on anthrax vaccination, that, as to attenuation in general, he is unable to find evidence of its occurrence for any other virus than that of anthrax. If we recognise the grand principle of attenuation of virus as resting on a sufficiently firm basis, we are hardly yet in a similar satisfactory position anent the *rationale* by which such modification is brought about. As everyone knows, M. PASTEUR seeks the explanation of this pregnant fact in the oxygen of the atmosphere, and the process is an essentially chronic one. KOCH does not concur in the hypothesis put forward by PASTEUR, but thinks that all the evidence at present adduced goes to show that the real agent is a high temperature. It is also regarded by KOCH as probable that chemical influences and various other conditions may have the faculty of attenuating the virus. In this connexion some remarkable investigations made by M. CHAUVEAU, and recently published in the *Lyon Médical*, are deserving of interest. The method adopted consisted of two chief stages; the virus used was the blood from cases of charbon. Vessels containing sterilised *ouillon* were inocu'ated with some fresh anthrax blood containing bacilli. These vessels were then placed in a chamber kept at an even temperature of 42° to 43° C., just as in the method adopted by PASTEUR, but instead of allowing the fluids to remain there for twelve days, they were removed at the end of about twenty hours, whence they were placed in another hot apparatus kept at a temperature of 47° C. At this temperature the fluids remained for periods varying from one to four hours or more. The process was then finished. The vitality of the virulent agents was not destroyed, but they had been rendered more or less harmless, according to the duration of the exposure to the greater heat to which they had been submitted. The first part of the experiment corresponded to the period of proliferation of the virus. The treatment in the second stove did not alter the external appearance of the cultures. The multiplication of the filaments and rods was suspended, but the formation of rudimentary spores was not prevented—on the contrary, their multiplication seemed to be favoured, or if they were not present, they appeared. CHAUVEAU claims that by this method the attenuation may be graduated at will. This was proved by inoculation experiments on guinea-pigs. Animals vaccinated with the fluid which had not been exposed to the higher temperature invariably succumbed in forty-eight hours, with considerable local œdema. Those inoculations with liquid which had been submitted to the heat for one hour invariably produced fatal results, but the time required was longer. And so forth with the remaining experiments. CHAUVEAU has further demonstrated, what PASTEUR had already proved, that the attenuated bacilli could be transmitted. In other words, cultivation of the modified micro-organisms through several generations failed to restore the virulent properties. The discovery of the principle of attenuation is a boon to mankind, not only from the possibility of protective vaccination, but also because it would seem to point out the road whereby we may render harmless those agents which seem to be incapable of positive destruction. It is possible that our disinfecting stoves only attenuate, and do not destroy, the dangerous germs.

PUBLIC opinion in New Zealand is apparently in advance of the same authority in the home country in respect to the expediency of Lunacy Law reform. Commissioners have been appointed to reconstruct the Act of 1882, and although they have not done all that is necessary, so much has been accomplished that there can be little doubt a considerable step in the right direction has been taken. Private patients cannot any longer be admitted into asylums on the order of a relative or friend and two medical certificates. "It is now," the *Australasian Medical Gazette* informs us, "impossible in New Zealand for any person to incarcerate his relative in an asylum without the order of the resident magistrate and two justices of the peace, who must call to their assistance two medical men, and they commit on 'sworn' evidence. If the resident magistrate is absent, or the district is situate more than ten miles from a resident magistrate's court, two justices of the peace may act by themselves, but the reasons must be stated on the order for reception." Our medical contemporary observes: "This is a most important alteration, preventing undue or precipitate action, and will tend to stop any charges being brought against the medical men who sign the certificates, or accusations brought against each other by angry relatives." This is one view to take of it; but there is another, and, we think, an even more important one. The effect of imposing these new preliminary proceedings will not so much be that of "preventing any undue or precipitate action," as of throwing fresh obstacles in the way of the early and prompt treatment of the insane. If it be injurious, as it undoubtedly often is, to examine a patient privately, it will be much more injurious to subject him to a public examination in a court of justice. We are convinced that the aim should be to simplify and not to further complicate the fuss and formality of the proceedings to be taken before bringing a patient under treatment. Matters will never be set on a satisfactory footing—for the insane—until medical

treatment for mental diseases is, like medical treatment for nervous diseases, *immediately* available. The safeguards which society and the sane require ought to be supplied by a rigorous and efficient system of inspection, to be commenced instantly *after* the commencement of treatment by the removal of a patient to a hospital, not *before*. There is much that challenges criticism in the scheme of the New Zealand Commissioners. They have meant well, but not been over-wise in some of their recommendations—for example, in the requirement that post-mortem examinations in asylums shall be made by "general practitioners." We recognise the purpose of this requirement. It is obviously to place the profession generally, outside the specialty, in a position to check practitioners in lunacy; but obviously, as the *Australasian Medical Gazette* points out, "Unless a psychological expert be associated in the duty, the pathology of insanity will not be promoted. The lunatic should be well protected by measures to discover, after death, any possible injuries, fractured ribs, &c.; whether he had been properly fed and not obviously maltreated, medically or otherwise. It should never be forgotten, however, in connexion with asylums, that their principal function is the promotion of psychological medicine and the *cure* of patients, not simply the safe detention of lunatics." It would be well indeed for science and, we believe, for humanity if this true view of the main purpose of medical institutions for the insane were more extensively recognised, or even as clearly understood, as the medical aspect of hospital provision for the ordinary sick is understood. Unfortunately, however, this is not the fact, as our contemporary proceeds to make plain. "The latter feature [that is, the use of asylums as places of "safe detention"] has already most disadvantageously developed itself in asylum practice in England, with the result of filling the asylums with chronic lunatics through discouragement of enterprise in medical treatment, and a false economy in the matter of drugs, instruments for physical diagnosis, &c." We regret to have to acknowledge that the indictment against us is true, and, which is worse, there is no near prospect of amendment.

A RETROGRADE step has been taken by the University of Cambridge in the liberal policy that had been adopted with such successful results in respect of its Medical School, in the refusal to provide for the sufficient endowment for the Downing Professor of Medicine. During the last few years, owing to a deficiency in the rents, the emolument has fallen far short of the amounts received in former years. Considering that the other professorships in the university, except the fellow Professorship of Law at Downing, have been placed on a sound financial basis, and that whenever the endowment has fallen short of what was considered an adequate provision it has been supplemented by the addition of a College Fellowship, the niggardly behaviour of the University in regard to one of its chief medical professorships is greatly to be regretted. The subjects treated by the Downing Professor chiefly relate to materia medica and therapeutics, and in fact may be said to constitute the chair in that branch of medical study at the University. It is a subject, moreover, which the University would do well especially to cultivate, since it is very evident great results are to be obtained by the development and study of experimental therapeutics. Already Cambridge has done good work in this direction, as several excellent papers in the *Journal of Physiology* testify. Dr. LATHAM, the present occupier of the chair, has worked heartily but without ostentation for the advancement and improvement of medical teaching at Cambridge. The present refusal, however, has no personal bearing; but whatever the cause, there can be no doubt of its being a very serious discouragement to the development of the medical school at Cambridge. Those who are advocating the establishment of a complete Professorial School of Medicine at the University by founding additional chairs in such subjects as obstetrics, medical jurisprudence, &c., can hardly look for support till the existing chairs receive adequate consideration. With the increased revenue the University has of late years derived from the augmentation in the number of its medical students, and from fees paid for medical degrees, the refusal to consider the just claims of one of the chief chairs in medicine to a share in the increased emoluments is illiberal, and we believe it to be ill-judged.

Annotations.

"Ne quid nimis."

THE MEETING OF THE GENERAL COUNCIL.

THE General Medical Council met on Thursday afternoon. The proceedings were opened, as usual, by an address from the President, from which it appears that several subjects of considerable interest will occupy the attention of the Council, including instances of alleged misconduct on the part of certain practitioners, calling for the judicial consideration of the Council; the report of a committee on unqualified assistants; and the report on Professional Examinations. The most important part of the President's address, given in another column, is that referring to the Bill now before Parliament. His words were altogether dignified and suitable to the crisis in which the Council and the medical authorities find themselves. Dr. Acland evidently thinks the days of the present Council are numbered. There is much difference of opinion in the Council as to the fitness and seemliness of any discussion of the Bill. It is thought by some that it would scarcely be becoming to discuss a measure which proposes that the Council shall cease and determine. But there is relief to some natures in discussion, and unless the Council acts very unlike itself in previous crises, it will have something to say on the Medical Bill; indeed, Mr. Macnamara has already given notice of motions suggesting amendments in the Bill. Mr. Marshall has given notice of a motion asking the Council to sanction the scheme for a conjoint examination of the two English Colleges. Dr. Quain has also given notice that on this proposal he will have some awkward questions to ask. But we understand that Mr. Marshall is likely to withdraw his motion, which, indeed, would be singularly out of place at the present moment.

ISOLATION IN THE PORT OF LONDON.

ACCORDING to an amusing but we trust not too accurate an account of some recent proceedings of the Common Council in the *Metropolitan*, that body does not appear to appreciate as it should do the labours of the Port Sanitary Committee and their energetic chairman, Mr. O. H. Davis, in the matter of the provision of proper means of isolation for infectious diseases for the port of London. The condition of the hospital ship *Rhin* has for a long time been such as to call for remedy, and since it would be impracticable

properly to fit it for the existing requirements of the port, the question has evidently arisen as to whether a new hospital ship should be procured, or whether a land hospital should be established. Both have their advantages; but the advantage of the ship over the land establishment is probably limited to the greater isolation of the hospital, whereas on shore the facilities for treating different diseases apart from each other, for administration, and in many other respects, are far superior to anything which can be obtained in a ship. Indeed, the main drawback to ship hospitals has always been the impossibility of treating in them two different diseases at the same time without risk of spread. And as regards any risk to neighbouring localities, a port hospital on shore as a rule stands in a better position than similar institutions belonging to other sanitary authorities, because more isolated sites can almost invariably be obtained. These considerations have, doubtless, led Dr. Collingridge, the port medical officer of health, to advise a land site in the low-lying and isolated flats near Gravesend, and the committee, knowing the difficulties attendant on the purchase of hospital sites, have practically secured one before coming to the Council and making the matter public. This, it is alleged, is in excess of the instructions conferred upon them, and some of the deputies consider that on this ground alone the whole proceedings should be stayed. We would, however, strongly advise them to support the action of their Port Sanitary Committee, unless, indeed, they desire to carry out the work themselves at a later date at a far greater cost, and in the mean time to retain for their hospital an old hulk which is unfit for its purposes, and which is probably the one piece of Corporation property of which no one either in the City or in London can feel proud.

DIFFUSE PERITONEAL SARCOMA.

NATURE knows little of the separations of science. Everywhere dissimilars blend, and our divisions must be arbitrary, if they are made at all. Few things seem to be less alike than an inflammatory process and a tumour; but one of the first discoveries of exact pathology was that there are morbid processes which may be assigned to either category with equal plausibility. The microscopical characters of an inflammatory exudation during its recession, when the active process is over, can scarcely be distinguished from those of some morbid growths; and it is certain that a simple inflammation is sometimes the starting-point of a tumour. It is, indeed, probable that the study of this relation of morbid growths to inflammation offers a more promising field for investigations into the pathogenesis of tumours than the obscure recesses of what may be termed adult embryology, to which the attention of investigators has of late been chiefly directed. Serous membrane is a structure in which the relations of inflammation and morbid growth may be studied with special facility in more than one particular. In this situation not only does inflammation follow neoplasms, as the shadow its substance, but primary growths are apt to lose their special tumour-forming propensity and assume an anatomical distribution closely resembling that of the products of simple inflammation. The peritoneum may be lined by a concrete layer of tubercular growth just as it is with lymph, and cancer has been observed to manifest a similar disposition. To these two, until now, our knowledge of the diffuse neoplasms of the peritoneum has been limited; but an example of a third form, in which the growth is regarded as sarcomatous and not cancerous, has just been published by M. Gaucher. It is indeed well known that the boundary line between sarcoma and carcinoma is no sharp one, and it is possible that, in some of the peritoneal growths previously recorded, the histological appearances may be similar to that which M. Gaucher prefers to call sarcomatous; but it still seems true that no case bearing the latter designation has before been published. As the condition is thus, in its special characters, presumably unique, it merits at least a passing notice. The patient was a young man, twenty-seven years of age, who had for two months suffered from loss of flesh and diarrhœa, with evacuations of blood. These had been followed, during the ten days preceding his admission into the Cochin Hospital, by rapid enlargement of the abdomen, which was found to be tense but tympanitic, containing, it was evident, much more air than fluid. In a few days, however, the amount of fluid had much increased, and by paracentesis 800 cc. of liquid was removed, sanguinolent and albuminous. The patient died three hours later. At the necropsy the peritoneum was found covered with large prominent "vegetations," dark-red, friable, so abundant on the epiploon as to form a continuous layer. They covered the intestines, liver, spleen, diaphragm, and, in short, the whole of the peritoneum, visceral and parietal. Nowhere else was there any disease. Neither in the abdomen nor out of it could any massive tumour be discovered, and there was no enlargement of the glands. The new growths in the peritoneum consisted of masses of "embryo-plastic nuclei," pressed closely together, and here and there supported by films of delicate connective fibres, and in these were abundant vessels. The structure had thus the characters of a round-celled sarcoma. It is evident, however, that such a growth must be regarded as malignant in the most accurate sense of the word. The symptoms, it will be seen, resembled those of tubercular peritonitis, from which a distinction would seem to be scarcely possible except by the sanguinolent character of the liquid obtained by paracentesis.

THE CONTROL OF TENEMENT HOUSES.

UNDER the auspices of the Charity Organisation Society a meeting was held on the 13th inst., at the rooms of the Society of Arts, to consider the best method of controlling houses which in the metropolis are let off in apartments to separate lodgers, but which do not come under the definition of common lodging-houses. The conference had been in the main brought about by the striking revelations of Miss Edith Bullar, a lady visitor, who in a short tract had described the scenes of immorality and vice which occur on the common stairs of some of the houses as soon as depraved and profligate people, having no settled home to go to, are turned out of public-houses, and it was her special desire that in some way the landlords of such houses should be compelled to fit the entrance doors with a lock and key, so that the staircases should not be used by the public at large. The meeting was largely attended. The chair was taken by the Right Hon. J. Stansfeld, M.P., and amongst the speakers were Lord Mount-Temple, Mr. Samuel Morley, M.P., Mr. T. Hollond, M.P., Dr. Thorne Thorne of the Local Government Board, and Dr. Edmunds, Dr. Gibbon, Mr. Shirley Murphy, and Mr. Wynter Blyth, metropolitan medical officers of health. The meeting was unanimous in its opinion that some method should be devised to control and regulate these houses; but it transpired at the onset that, although power to make bye-laws concerning them had been in operation since 1866, and although model clauses as to tenement houses have been issued by the Local Government Board since 1880, there is not a single district in the metropolis in which any bye-laws so compiled as to be of any use are in operation, a state of affairs which we cannot but think reflects very gravely on the London vestries, amongst whom, as one speaker said, are included a considerable number of the very tenement mongers whose premises need control. Some difference of opinion was expressed as to whether the tenement houses should, like the

metropolitan common lodging-houses, be placed under the supervision of the police or under the officers of the sanitary authorities. The latter plan has the advantage that it could be effected without fresh legislation, and it was felt by some that certain of the residents in such houses might object to have their homes in any way brought under the control of the police force. On the other hand, it was urged that the staircases to the several tenements are practically public places, the groups of several tenements constituting in reality vertical streets of separate dwellings, and also that the police already possess an inspection force ready to carry the work into execution. The latter plan evidently found most favour with the meeting, which, doubtless bearing in mind the failure of the vestries in the past, passed a resolution in opposition to the advice of the chairman to the effect that all tenement houses should for the purposes of police supervision be regarded as public places.

ATREMIA.

IT is perhaps not difficult to find at all events a partial explanation of the tendency of the human mind to affix a name to every apparent or actual new idea. But the value of this procedure may sometimes be doubtful. Dr. Neftel of New York, writing in the current number of Virchow's *Archiv*, contributes a lengthy paper on what he is pleased to call "atremia." Three synonyms are given in a footnote, so that there is no lack of designation for the group of symptoms which the writer wishes to publish. Atremia, akinesia, heremia, cataclisia, at the reader's pleasure, may be applied to the following state. The patient, invariably a female, is unable to walk, stand, sit, or read, and yet there is absolutely no alteration of the power of voluntary movement or impairment of intellect. Profound sensations described as soreness, deadness, softness, stiffness of the whole body, seem to be the patient's reason for the inability to carry out the acts above mentioned. These paræsthesiæ are suffered from almost constantly, and are much intensified by all forms of movement. The affection, allowing it for the nonce a separate existence, may be unattended, according to Neftel, by any disorder in the rest of the body, though not unfrequently it is associated with hysteria and some derangement of the generative system. The illness may keep the sufferer in bed for several years, it may spontaneously disappear, or even be cured by drugs, but in most cases it tends to relapse, and ultimately the patient is reduced to the condition of a confirmed invalid. That universal resource for diseases of the nervous system, galvanism, although apparently capable of bringing about some temporary relief, is utterly powerless in the majority of instances to procure a lasting result. The affection is believed by Neftel to be the almost exclusive appanage of the American female population. In a supplement to the article on atremia the same author dilates on the nervousness of Americans, which, if we may judge from all that is said and written on the subject, would seem to be in advance of the most highly civilised Europeans. An attempt is made to account for the prevalence of the neurotic tendency in Americans, and the most probable view is taken—namely, that the combined influences which go to make up what we term civilisation play the most important *rôle*. But it is not only on the nervous side of his organisation that the American is believed by Neftel to be inferior to the European. It would seem that their tenacity for all the functions of animal life is below par. There is more sterility in the women and impotence in the men than is met with in Europe. The want of acclimatisation, whatever that may mean, is adjudicated by Neftel to be a potent factor in bringing about the deterioration of race. Change of climate to a European resort for a prolonged period is believed to be one means of successful treatment of the neurasthenia and other disorders. We do not think it likely that the conclusions of this new writer on nervous disease will pass uncontested. It would be legitimate to question whether the condition of "atremia" might not be regarded as one mode of manifestation of hysteria, using that term in its widest sense; it is certainly no sufficient counter-argument to say that the patient showed no other signs of the hysterical state. We have purposely said nothing of malingering and feigned diseases; such notions are possible, but not probable, explanations of the very chronic affections to which we allude

THE LOCAL GOVERNMENT BOARD INQUIRY AT THE WESTMINSTER WORKHOUSE.

ON the 13th ult., pursuant to notice given to the board of guardians of the Westminster Union by the Local Government Board, an official inquiry, conducted by Messrs. Hedley and Taylor, was opened into the conduct of the master, Mr. Bliss. It originated from sundry complaints having been made to Mr. Fraser, solicitor, of Soho-square, one of the guardians, by whom, in conjunction with two of his colleagues, a statement of certain charges against the master was forwarded to the Local Government Board. The charges generally were that the master had been guilty of bad language, in some instances of actual violence, to certain of the inmates; that his conduct to inmates, fellow *employés*, and visitors to the house had been in many instances most offensive; that he had repeatedly refused to comply with the medical officer's requisitions for stimulants for the sick, and other necessaries; that he had interfered in the sick and infirm wards, directing patients to be discharged therefrom against the orders of the medical officer; that he had not sent to the friends of deceased persons any intimation of their deaths; that he had neglected to register the births of certain of the children; that there were entries in the medical officer's portion of the Medical Relief book of brandy, wine, and gin which had not been ordered by the medical officer, nor supplied to the sick. In support of these various charges a number of witnesses were called, including the superintendent of the schools, the head-nurses on the male and female side, the male insane attendant, and the labour mistress. The inquiry extended over the unusual period of more than ten days. The above is a mere statement of the facts as elicited at the inquiry. Comment upon them must be left till the issue of the inspectors' report.

JAMAICA PLANTATIONS.

THE last annual report of the public gardens and plantations of Jamaica, drawn up by the able director, Mr. Morris, is, on the whole, a satisfactory one. Considerable success was realised in the operations of raising and distributing plants of economic value throughout the island. Owing to the important concession made by the Atlas Steamship Company, cases of plants were conveyed free by the coasting steamer from Kingston to all the outports. Plants were also conveyed free by the Jamaica Railway from Kingston to all the railway stations. The failure of the May rains, or "seasons," following a period of dry months with parching winds, had a prejudicial effect on all agricultural operations. In some districts the effects of the drought were severely felt among the young plants of coffee and cinchona. In several districts of the island the sugar cane was affected by a blight, which did much damage in the eastern and northern districts of the island. Mr. Morris came to the conclusion that this blight was produced by an aphis. Notwithstanding these considerable disasters the report shows that there was improvement in the staple industries on the island, the fruit trade, especially in bananas, having been flourishing.

Much interest attaches to the excellent condition of the cinchona plantation; the objects of the Government in maintaining these plantations were to show that cinchona barks of good quality could be successfully grown in Jamaica, and also that cinchona planting possessed all the elements of a sound and remunerative industry. These objects, looking to the number and variety of healthy barks grown and sold for fair prices, must be regarded as fulfilled. Cardamom plants have been introduced for the first time in Jamaica during the past year. The kola nut, which goes by the name of "bysi," seems to be plentiful; its stimulant and nutritive properties appear to be respectively due to the caffeine and starch which it contains. The citrate of caffeine can be readily obtained from these nuts; they contain more caffeine than do coffee berries, and the caffeine is said to be in the free or uncombined state.

CHLOROMA.

NEARLY fifty years ago Billroth is said to have described a form of malignant growth distinguished by a green discolouration, whence we derive the name of chloroma or "green cancer" (Billroth). There can be no question that the disease is of rare occurrence. In 1878 Huber (*Archiv der Heilkunde*, xix.) was able to collect only seven examples. The tumours are not cancerous in the modern sense of the term, and so may best be described as chloro-sarcomata or more simply chloromata. Such tumours have been met with in connexion with bones (e.g., the skull), but perhaps the chief centres of the lymphoid tissue of the body are the seats *par excellence* of tumours of a green colour, this anatomical system having become involved in a secondary manner, or even having been the primary seat of disease. As an apparent example of this we shall describe the main features of an interesting case recorded in Virchow's *Archiv* for January, by Louis Waldstein. A man, aged forty-four years, by occupation a labourer, suffered from a short attack of "ague" many years before the commencement of his present illness. Without any assignable cause the symptoms of marked progressive anæmia set in rather suddenly. Satisfactory collateral evidence of the nature of the disease was not forthcoming; the urine, however, was noted to be of a green colour, and there was rather high persistent fever. On the twenty-fifth day of the illness the patient complained of pain on percussion of the sternum, and later also of some of the ribs. Gradual enlargement of the spleen and liver was detected by the ordinary methods. A great increase in the number of the white cells of the blood was first observed on the forty-first day of the illness; repeated observations negatived the existence of leucocythæmia before that date. Death followed in three days, on the forty-fourth day of the malady. At the post-mortem examination the mediastinal glands were found to be much enlarged and coloured green; the retro-peritoneal glands and those of the portal fissure were also stained green. Although there were plugs of leucocytes in the hepatic capillaries, distinct areas of hyperplasia of the lymphatic tissues of the liver were not observed. It will be remembered that some investigators regard the white areas in the kidneys and liver of cases of leucocythæmia as extravasations from the bloodvessels. The spleen was enlarged, the Malpighian corpuscles being much overgrown. The medulla of the bones was red, and in many places was of a greenish hue. Wherever the chlorotic tint was seen, the microscope revealed either a diffuse "colouration" or the pigment existed in granules in the protoplasm of the cellular elements. The green tint has been severally described as apple-green, grey-green, grass-green. The results of chemical analysis have been by no means satisfactory. Huber thought the pigment was that of a fatty body, Balfour regarded it as biliverdin, Dressler suggested its identity with the colouring matter of greenish pus, whilst Dittrich has advanced the notion of its dependence on putrefaction. Waldstein is inclined to believe the coloured pigment was derived from the colouring matter of the blood, and he points to its general presence in the morbid tissues and to its passage with the urine as favouring his view. It is not at all improbable that every form of pigment occurring in the human body may ultimately be traced to one original source—viz., hæmoglobin.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE MEDICAL BILL.

AN important meeting of the Fellows of the College of Physicians took place on the 12th instant, to consider a report from the committee which had been appointed to report on the Bill. There was a fairly numerous attendance, and after a discussion on the main features of the report, the recommendations of the committee were adopted. The chief conclusions at which the Fellows of the College arrived were: 1. That no opinion should be offered on the constitution of the Medical Council. 2. That the College agree to the principle of a common medical board for each division of the United Kingdom, and that no objection be taken to the method of election, nor to the main functions assigned to such boards. 3. That the corporations as the principal licensing authorities should have a preponderance of members on the medical board for England, just as is granted to the universities, as the chief licensing authorities, in Scotland. 4. That every opposition be made to the endowment and incorporation of the medical boards. 5. That the College accept the scheme of a separate licensing examination, entitling to registration as registered medical practitioners. In accepting this clause the College supports *voluntary*, as opposed to *compulsory*, affiliation to the various corporations and universities, on the part of those who pass the qualifying examination proposed by the Government. 6. The College suggests a penalty for anyone calling himself a physician or a surgeon, who is not a graduate in medicine or surgery of a recognised university, or does not hold a qualification from a College of Physicians or Surgeons. A committee was appointed to wait on the Lord President of the Council and lay these views before him.

TYPHUS IN HAMMERSMITH.

AT a meeting of the Metropolitan Asylums Board last Saturday attention was directed to a serious outbreak of typhus in the Roman Catholic Convent Home, Nazareth House, Hammersmith. From a report on this subject addressed by the Medical Officer of Health, Dr. Collier, to the Board of Works for the Fulham district, we learn that this institution contains as many as 300 or 400 persons, and that at the end of February Dr. Collier was informed by Mr. Alderton, the medical attendant of the institution, that ten of the inmates were suffering from a fever which he believed to be typhus, and that a considerable number had lately been attacked with the same complaint, one having died. On visiting the Home Dr. Collier was shown seven children and three Sisters of Mercy suffering from fever, the former in a dirty condition. The seven children were shortly afterwards removed to hospital, the mother superintendent objecting to the removal of the three Sisters. Some doubt appears at first to have been entertained as to the nature of the illness, but another case—one of undoubted typhus—having occurred, the character of the disease became evident. Other cases shortly after followed, and one of the nurses in attendance upon the sick developed typhus and died. Owing to no dates or minute particulars having been obtained, the origin of the disease could not be discovered; but Dr. Collier

states that he had previously called attention to the overcrowded condition and want of ventilation in the institution, and that he is not at all surprised at typhus fever spreading in an atmosphere so polluted, and where there was such neglect of personal cleanliness. Altogether some thirty-two persons were attacked with typhus, seventeen before the attention of the medical officer of health was directed to the outbreak. Dr. Collier expresses the opinion that such an institution containing so large a number of persons should be compelled to adopt proper sanitary regulations, and should be required to obtain a licence from some constituted authority; and apparently with this object the Metropolitan Asylums Board forwarded a copy of Dr. Collier's report to the Home Secretary. The report does not show in detail what steps were taken under existing Acts to remedy the evils complained of, but the whole subject is of so much importance that we trust the course adopted by the Metropolitan Asylums Board will lead to a thorough investigation into the powers which sanitary authorities possess for controlling such institutions.

MULTIPLE XANTHOMA.

OUR knowledge of the pathological affinities of xanthoma are still rightly regarded as of a very imperfect nature. Multiple xanthoma, as distinguished from X. palpebrarum, is an extremely rare affection; the disease has been recorded, we think, not more than six times in England. Twenty-eight cases have been collected by Albert Poensgen in Virchow's *Archiv* for February; a *résumé* of the whole subject and a carefully described exceptional case have also been included in the paper. The patient was a male, aged twelve years, on whom, when eight years old, soft swellings on the extensor aspects of both elbows were first noticed, which gradually increased in size, and attained their present appearance and dimensions in the course of eighteen months. Similar growths began to develop at the age of ten years on both knees, and some small nodules also appeared first on the right, and later on the left, fingers. The tumours on the knees and elbows, roughly speaking, measured about three inches in their length and breadth, and it need not be said were not regarded as of the nature of xanthelasma. But at the age of ten years some yellowish areas appeared on the fold of skin between the thumb and index finger, first as specks which gradually extended; similar appearances were afterwards observed on the surface of the above-mentioned tumours and in other parts of the body. The boy came under observation when twelve years old, and then was the subject of aortic stenosis, with cardiac hypertrophy. The presence of the nodules about the fingers, taken side by side with the cardiac mischief, suggests the possibility of a rheumatic origin. There had never been jaundice, the urine was not albuminous, but no mention is made of the presence or absence of sugar. Two of the tumours were removed during life and carefully examined; the examination showed that they were lipomata; the yellow patches, as has been described in previous cases, were made up of a connective tissue infiltrated with fat. The writer of the article draws particular attention to the features of the occurrence of large fatty tumours of symmetrical distribution, to the age, sex, absence of hereditary taint, and absence of jaundice in his case. As so often happens in the rarer form of the affection, the eyelids escaped; perhaps this will always be found to be the case when the disease appears under the age of puberty. It was so in Mr. Startin's example of the girl aged five years. Out of 103 cases of xanthelasma collected by Poensgen, 92 affected the eyelids; 65 were females and 38 males. Of 28 cases of X. multiforme, the hands showed the disease sixteen times, the elbows eleven, the knees nine. The mucous membranes are also well known to be affected. Dr. Mackenzie has reported cases in which the joints of the fingers presented an abnormality. In the *Annales des Dermat. et de Syphilogr.*, tome i., 1880, Carry has narrated two cases characterised by the presence of tumours similar to those met with by Poensgen. This last writer speculates on the affinities between the fatty tumours and xanthelasma; the tendency to symmetry suggests to him the dependence of the affection on disturbances of the nervous system.

THE HEALTH OF THE QUEEN.

IT is with profound satisfaction we are able to state that there is no cause for alarm on any ground in connexion with the present state of Her Majesty's health. The injury sustained has, unhappily, been of a nature necessarily entailing a slow recovery. The progress made has been good, though protracted; and notwithstanding some time has elapsed, and a much longer period will undoubtedly be required to complete the repair and allow of a final return to the normal condition, every confidence is felt by those in a position to form a trustworthy opinion as to the result. Sir J. Paget's view of the case may be accepted as entirely satisfactory. Meanwhile the deepest sentiment of loyal sympathy for the suffering which the Queen has endured, and the incapacity for exertion which still distresses her, will pervade the whole community. On the one hand, there is cause for sincere congratulation that matters are not worse; and, on the other, much occasion for regret that what has certainly not been overstated is really so severe. A sprain affecting a large joint is, at all times and under all circumstances, a painful and depressing infliction, and, in the case of a subject of active habits and energetic temperament, must needs prove trying in the extreme. Fully recognising these facts, it is with especial gratification we are able to chronicle a report which is at once reassuring and encouraging.

THE GOVERNMENT MEDICAL BILL.

THE powerful and quickening measure for improving our medical examining system will, if not spoiled under pressure of "interests," be a boon to students, an additional security to the public, and beneficial to the profession. It is the more gratifying to us, as it approaches nearer THE LANCET Bill of 1871 than any Government Bill has ever done, both in the representation of the profession on the Council and in the abolition of the individual representation of medical authorities, which, more than anything else, has brought the Council into disrespect. The Corporations which survive this measure, supposing it to become law, will be strong and honourable Corporations, and doubtless much more respectful to their members than existing ones, which have been too exclusively occupied with pounds-shillings-and-pence considerations, and neglected the weightier duties of guarding the dignity of the profession. We are glad to find that the Government have abandoned the idea of an annual registration fee.

EXPOSURE OF SCARLET FEVER IN BOARD SCHOOLS.

IT is not encouraging to find that, according to the ruling of the stipendiary magistrate, Mr. W. H. F. Boughey, Brierley Hill, no action can be taken without the consent of the Attorney-General against those who expose children affected with scarlet fever, say in Board Schools. This was the answer to Mr. Pearse, at whose instance a summons was taken out against Maria Godley, mistress of the National Schools. Such a state of the law is a protection to those who break it, and in breaking it expose hundreds of children to the most deadly of children's diseases.

BERI-BERI.

THE very fact of limitation to a certain part of the surface of the globe lends to the inquiry into the nature of such diseases as beri-beri a suggestiveness which has unfortunately not yet been productive of commensurate results. The relations of beri-beri with other maladies have long been the subject of dispute, and the final solution of the question cannot be said to have been advanced by the most recent contribution to the study of the disease by M. Durodié. The central factors which go to make up the clinical picture of the disorder are anæmia, œdema, and numbness, with paralysis, chiefly affecting the inferior extremities. The disease may run an acute course, or the tedium of its symptoms may be felt over a long period. The profound and rapid anæmia has suggested to many German writers the question of the affinity of the malady with progressive pernicious anæmia. But it seems certain that we have to do with something more than an idiopathic anæmia, and it cannot be said that the association with the progressive pernicious variety would do anything else than render the disease more obscure. The œdema would seem to have somewhat special characteristics; it is of rapid onset and of wide extent, and in the final stages dropsy of all the serous cavities, but more especially of the pericardium, has been observed. The stiffness with numbness and palsy of the legs are also strongly marked features. It appears that a residence of more than six months in places where beri-beri is endemic is necessary for the due appearance of the disease. The imbibition of much brackish water also seems to play a part in the causation. The increase of the number of cases in gaols at the end of the rainy season is a remarkable fact, the full explanation of which would probably cast much light on the etiology, as would also the complete *rationale* of the limitation of the remarkably fatal disease to a littoral band of about fifty miles in breadth. The alliances of beri-beri with disorders of the nervous system and with the malarial fevers are also considerable. The disease has been studied more by English than other physicians, and the majority seem to have regarded the affection as an essentially constitutional disorder; and even the most competent of those English observers do not seem to think a more differentiated opinion of the nature of the pathology is possible in the present state of our ignorance.

A VOLUNTEER MEDICAL CORPS.

A MEETING of medical students and those interested in the movement was held last week at Charing-cross Hospital, to consider the advisability of forming a Volunteer Medical Corps. Surgeon-Major Evatt was called to the chair, and introduced the subject in a paper in which he sketched a scheme. This scheme consists in organising amongst medical students a corps capable of providing bearer or ambulance companies for the volunteer army, and holding the same relation to it as the Army Medical Department holds to the regular army. Dr. Evatt suggested that a separate and complete "Bearer Company" of some 120 to 130 men should be formed at each of the medical schools. Men thus trained would be enabled to instruct laymen in the special duties of bearers, and they could also work a system of municipal ambulances. A resolution declaring that it is desirable to form such a Volunteer Medical Corps was carried, only one speaker dissenting, and a large committee to take the initiative stages was appointed. This is designed to meet a great want. The Volunteers need an Ambulance Corps. The question is, whether the plan proposed offers the best means of supplying the want. We fear that success can hardly be assured on the lines laid down by Surgeon-Major Evatt. For one thing, the time of medical students is already fully occupied with other important engagements. When trained in their duties they would be quickly scattered abroad, and in time of emergency it would be difficult to get all the reserves together without far more interference with daily duties than would be the case with individuals belonging to another class. We understand that Lord Wolseley and other distinguished persons accord their hearty support to the movement.

THE PROFESSORSHIP OF SURGERY AT BELLEVUE.

IT will be readily believed that since the resignation of his chair, in December last, by the lamented Van Buren, the question of his successor has been one of the first interest in New York. This honour has fallen on Dr. F. S. Dennis. Though Professor Dennis should think himself fortunate in being elected at a comparatively early age to succeed such a man in such a chair, we have no doubt that he will justify his election. Professor Dennis is, as Van Buren was, a graduate of Yale College. He was a favourite pupil, and at one time an assistant of Dr. James R. Wood. He was two years in Bellevue Hospital, and in the year of his graduation took the first prize and gained the highest mark in the competitive examination. Dr. Dennis was not content with learning the surgery of his own country, but studied for two years under Langenbeck, and enjoyed very intimate and pleasant relations with the illustrious surgeon of Berlin. We are glad to add that Dr. Dennis spent some time in studying surgery in London, and became a member of the English College of Surgeons. For the last few years Dr. Dennis has been on the staff of the Bellevue Hospital, and has done good work as a teacher of anatomy and surgery.

"THE PUBLIC PROSECUTOR AND THE 'PECULIAR PEOPLE.'"

UNDER this heading the *Globe* reports a case in which the Public Prosecutor has endeavoured to devolve his official duty on the Guardians of St. Saviour's, and in which the local authority has referred the matter back to the Public Prosecutor. That public officer would seem to be chiefly occupying himself with a solution of the problem, "How not to do it?" We prayed for a public prosecutor, and Jupiter has given us a log. Hereafter, perhaps, we may get a stork; but of the two that rapacious monster would be preferable. His rapacity might be held in check; but no amount of remonstrance or entreaty has the effect of inducing the official vindicator of public wrongs, as at present commissioned, to stir himself. Obviously, the systematic neglect of measures to save life by curing disease in the case of a child is an offence against society which in the interests of public safety and the prevention of crime ought to be punished. Very peculiar people may adopt this mode of letting their children die if the omission to seek means of relief is not visited with a penalty.

KLEPTOMANIA.

MR. DE RUTZEN, of the Marylebone Police-court, has his own ideas about kleptomania. He does not deem it necessary to explain them, nor would it, probably, greatly conduce to public enlightenment on this interesting subject if the worthy magistrate did put himself to this trouble. As a matter of fact, the "ideas" which persons unskilled in regard to any particular subject claim as their "own," are often inexplicable. If we may judge from the course taken by Mr. De Rutzen in a recent case, his "own idea" on the subject of kleptomania is essentially sceptical. It appeared in evidence, that a governess, who had either insanely or impudently appropriated several articles at the Baker-street Bazaar, was actually under medical treatment and "suffering from hallucinations." Unless Mr. De Rutzen

actually disbelieved this testimony, it was clearly his duty to remand the prisoner for medical examination as to the state of her mind; but acting on his "own idea" of kleptomania, he committed her for trial.

THE TUBERCLE CONTROVERSY.

SINCE the publication of Dr. Spina's monograph in which he has sought to minimise the importance of Koch's discovery of the tubercle bacillus, hardly a week passes without the medical journals of Berlin and Vienna containing contributions from adherents of one or the other of these scientists. The Vienna *Allgemeine Medizinische Zeitung* publishes rticles under the heading "The Tubercle-Bacillus War," and amongst them reproduces the opinions of English observers as gathered from recent debates in the London Medical and Pathological Societies, contrasting the cautious tone adopted by our *confrères* with the headstrong advocacy of Koch's views by the Berlin school. The latest contribution to the subject is by Dr. Marchand of Giessen, who reviews the whole matter in an article well worthy of perusal in the last number of the *Deutsche Medizinische Wochenschrift*, in which he shows the bearing of Koch's discovery not only upon the question of the contagiousness of phthisis, but upon its hereditary transmission. But perhaps the main point of contention at present, and one which certainly requires definite settlement, is whether artificial tuberculosis can be excited by the inoculation of non-tubercular materials, as ten years ago was so positively stated by numerous experimenters. Baumgarten contributes to this discussion an article in which he declares that the products of inoculation by non-tubercular substances, of which he has tried a large variety, although sometimes superficially resembling those of true tubercle, have neither the finer histological characters nor the course of the latter. He is persuaded that the specificity of tubercle is proved, and that the bacillus is the essential factor in the virus, correctly stating that no one has yet found the bacillus in any lesions that have not the character of tuberculosis. He also maintains the identity between bovine and human tuberculosis. The Congress which is now in session at Wiesbaden will have had this subject under discussion, and we may postpone further comment until the reports of that debate are received.

SIR PHILIP ROSE, BART.

SIR PHILIP ROSE, whose death took place on the 17th inst., began life as a surgeon in the Indian Army, but gave up surgery in favour of the law, and was placed on the rolls in 1844. The noble institution for consumptives at Brompton owes its existence, and is largely indebted for its prosperity and increasing usefulness, to his energy and exertions, and of this hospital he remained the hon. secretary until his death. In Sir Philip's long and painful illness he received the unremitting care of his medical attendant, Mr. Bezley Thorne, but human skill was unavailing to check the failure of the vital power, which, at the age of sixty-eight, had spent its force.

SANITARY APPLIANCES.

THE *Builder*, in its issue for the 7th inst., embodies in a special supplement an account of a number of the appliances and materials which were exhibited at the Building Trades' Exhibition at the Agricultural Hall. They include articles of sanitary interest, such as traps, lavatories, waterclosets, ventilating shafts, &c., the whole being well illustrated by a series of drawings. We are glad to see that simplicity in the construction and fittings of waterclosets has been most successfully obtained, as, for example, in Shank's crown wash-out closet, which consists of an earthenware basin and S-trap, cast in one piece, with its ventilating aperture. The basin is embedded in cement in an iron case, which, when filled, only requires a simple rim of woodwork as a seat, and thus the usual enclosed space, so useless and at times so offensive, which is formed around the basins of most waterclosets, is got rid of. For schools, institutions, and hospitals, where it is especially advisable to have no hid len spaces about waterclosets, such an apparatus is eminently useful.

FEVER HOSPITAL ACCOMMODATION IN SUNDERLAND.

HOSPITAL accommodation for fever patients is at present a burning question in Sunderland. The Fever Hospital, or, as it is called, "The House of Recovery," is occupied by small-pox patients, and as, according to the report of Dr. Thorne Thorne to the Local Government Board, the institution is incapable of isolating more than one infectious disease, the sanitary authority finds itself in "a fix." It is said that the Sanitary Committee is about to consider the desirability of taking over the Union Hospital. We trust this is incorrect, for the building, being on the poorhouse grounds, will always be redolent of pauperism, and will consequently prevent artisans and hard-working but independent persons generally from entering the institution unless they wish to incur the risk of being branded as paupers. The Sunderland people had much better face the question boldly, and build a new hospital. As pointed out by our Commission, it is far more necessary than a new Town Hall.

THE NATIONAL HOSPITAL FOR CONSUMPTION, VENTNOR.

THE Duke of Albany presided on Wednesday evening last at a public dinner in aid of the funds of the above hospital. His Royal Highness made just such a speech as might be expected from him, eloquently advocating the cause of the hospital, the response being a subscription in the room to the amount of £1200. It was a cause of regret that the founder of the hospital, Dr. Hassall, was unable to be present.

SNAKE POISON.

A PAPER by Dr. Baddaloni, on Permanganate of Potash as an Antidote to Viper Poison, was read at the Medical Society of London on Monday last. It related experiments conducted to test the truth of Lacerda's assertion that permanganate of potash is both a chemical and a physiological antidote to viperine, the active principle of viper poison. He has failed to obtain any evidence in support of the latter part of this assertion. Prince Lucien Buonaparte—whose chemical investigations into viper poison first established the fact of the existence of a special active principle, which he named "viperine"—was present and spoke, referring to the great need there is of investigation into the chemical change produced in the blood by viperine, a change which destroys its power of coagulability. Sir Joseph Fayrer fully admitted that permanganate of potash is a chemical antidote to viperine, though not a physiological one; but he thought it might be of use as a local application to snake-bites, after means had been taken to prevent absorption of the poison into the general system; in fact, as a substitute for excision and cauterisation of the part. He referred to the marked difference in the physiological effects of the poison of the viperine and colubrine snakes, the former being less intense and preventing coagulation of the blood, the latter more rapid and intense, and not interfering with the coagulability of the blood. He doubted the possibility of ever finding a true physiological antidote to snake poison that would be effectual if introduced into the body after the poison had once passed into

the general circulation. Sir Joseph Fayrer was able to add many interesting and valuable facts from his own experience, and in reply to a question from Dr. John Ogle gave a caution about the popular belief in the safety and efficacy of sucking a snake-bite. He stated that the poison is absorbed even through an entire unabraded mucous membrane, and he doubted whether it is possible to extract by suction anything more than a very minute proportion of the poison introduced in the tiny puncture made by the poison fang of a snake.

NOTIFICATION OF INFECTIOUS DISEASES.

THE annual general meeting of the North-western Association of Medical Officers of Health was held on the 12th inst. Dr. J. M. Fox, who was elected president for the ensuing year, delivered an address in which he reviewed the position and attainments of sanitary work. Speaking of the official position of medical officers of health, he objected to the attitude of the Local Government Board with regard to the notification of infectious diseases as unwise. He said that it was not necessary to import the medical attendant into the question at all, and suggested the desirability of enlarging the functions of officers already existing, such as those of the registrars of births, deaths, and marriages, and the relieving officers, rather than the creation of fresh machinery. A petition to the House of Commons was adopted urging the necessity for some State regulations for the control of persons practising midwifery for gain.

MR. T. PRIDGIN TEALE.

WE regret that Mr. Teale will be unable to attend the meeting of the General Medical Council. He has been suffering from a poisoned thumb, without visible wound, contracted at a post-mortem examination. It is very gratifying to add that Mr. Teale is quite convalescent under the influence of holiday and the bracing air of the north of Yorkshire.

THOUGH the need of public mortuaries has been recognised and met by some of the more enlightened of the metropolitan vestries, in others parsimony or obtuseness still operates to hinder the supply of so essential a requirement. At an inquest held at King's College Hospital last week, the medical man who made the post-mortem had to complain of having to perform the necropsy, under very inconvenient and disadvantageous circumstances, in the wretched room in which the deceased had lived and died. The coroner stated that his repeated remonstrances to the vestry had been met by the plea that no site was available in the parish.

A DEPUTATION from the Scottish Universities waited on Lord Carlingford and Mr. Mundella on Thursday at the Privy Council Office, in reference to the bearing of the Medical Bill on those institutions. The interview was private, but we understand that the members of the deputation, whilst accepting the principle of the measure, urged the adoption of certain amendments, which the Lord President promised should receive due consideration.

SOMETHING should be done, and at once, to protect the public from the perils of telegraphic wires stretched across streets. If attention is not speedily directed to this important matter, it is almost inevitable that a great calamity will occur.

NEWS has reached Constantinople to the effect that the "plague" is raging with increased virulence on the Persian frontier.

AN admirable agency for the provision of nurses for the sick poor at their own homes is at work and has the powerful support of the Duke of Westminster. We wish the "Metropolitan and National Nursing Association" every success in this department of its enterprise. It has been in operation several years, but it has scarcely yet achieved the popularity or secured the sympathy which it deserves.

MR. E. H. OSBORN, Inspector of Factories, and Dr. Bridges, one of the medical inspectors of the Local Government Board, have been appointed by the Government to act as a Special Commission for the purpose of inquiring into the effect of the process of over-sizing cotton goods upon the health of the operatives engaged—a subject on which we commented in our issue of March 17th.

THE attention of medical men intending to visit the Hygienic Exhibition at Berlin is directed to the Berlin Polyclinical Institution, in which clinical lectures on Otology, Dermatology, Syphilography, Laryngoscopy, Neuropathology, Electro-therapeutics, Ophthalmology, &c., are delivered regularly. Every course commences on the first of the month and is continued for thirty days.

THE King of Saxony offers a prize of a silver *jardinière*, with 900 marks, to be awarded by the German Fishery Commission, for the best essay on "The Pollution of Watercourses and its Prevention, with special reference to the Maintenance of the Life and Health of Fish." Essays are to be sent to Dr. P. Boerner, 8, Burggrafen Strasse, Berlin, before December 31st, 1884.

AT the last meeting of the Council of the Royal College of Surgeons, the Jacksonian Prize of the College was awarded to Mr. Anthony Alfred Bowlby, F.R.C.S., Curator of the Museum of St. Bartholomew's Hospital, for his essay on "Wounds and other Injuries of Nerves, their Symptoms, Pathology, and Treatment." The Collegial Triennial Prize was not awarded.

THE Board of Managers of the Philadelphia Hospital for Skin Diseases have recently added to their facilities a complete system of baths, comprising the Turkish, Russian, vapour, medicated, and electric, for the giving of which the latest and most approved apparatus has been obtained at considerable cost.

THE American Government are about to establish quarantine on the southern coast of the United States in consequence of the prevalence of yellow fever in Cuba and other islands of the West Indies.

SIR WILLIAM HARCOURT, last week, in reply to a deputation of London bakers, is understood to have expressed the intention of the Government to prevent by legislation the construction of bakehouses underground for the future.

PROFESSOR ALEXANDER OGSTON, by permission of the Senatus, will conduct a class of Operative Surgery at the University of Aberdeen during the summer sessions.

DR. RUTHERFORD HALDANE has been elected Assessor of the Council of the Edinburgh University Court, in the room of Dr. J. H. Balfour, resigned.

DR. GARDEN has been appointed to give practical instruction in skin diseases at the University of Aberdeen.

THE GENERAL COUNCIL OF MEDICAL EDUCATION & REGISTRATION.

THE General Medical Council met on Thursday, at two o'clock, under the presidency of Dr. Acland. In opening the proceedings,

The PRESIDENT called attention to five cases of alleged or proved misconduct of practitioners, which he said would have to be brought before the Council. He then referred to the report of the Committee of the Council on Unqualified Assistants, and said that the subject of employing "unqualified men" as assistants would have to be fully weighed before pronouncing against carefully directed methods of employing students, on account of the misconduct of some few legally qualified practitioners. The President next called attention to the report on Professional Examinations by Professor Gairdner, Mr. Stokes, and Mr. Teale, and to the change proposed in the Government Bill in respect of the teaching in the Medical Schools, of which he said it was impossible to exaggerate the importance. Referring to the returns from the Army and Navy Medical Departments, he stated that whereas in the year 1864, out of 49 candidates for the Navy, only 28 passed and 21 failed, 16 being found deficient in Anatomy, 4 in Medicine, and 14 in Surgery, none who went in for the examination last year were found to be deficient in any subject; and whereas in the year 1864, out of 151 applicants for places in the Medical Department of the Army, 31 failed, 12 having failed in Anatomy, 14 in Surgery, and 23 in Medicine, in 1882, 60 out of 69 candidates passed so as to qualify. The President then proceeded:—"The Council will have noticed that allusion has been made more than once to the Medical Bill introduced into Parliament by the Government. Copies of the Bill were forwarded to me for the use of the Council. I therefore beg to be allowed to say a very few words, on presenting it to you, in relation to the progress of legislation in respect of the Department of Medicine. The disjointed and unsatisfactory state of medical education in the first half of this century had long baffled the endeavours of many honourable men who desired to remedy its defects. After years of discussion the present Council was formed in 1858. At least one great advantage immediately followed. Men who were supposed to represent conflicting interests met together, and after a short time set themselves to the national task of securing a more uniform and better education for all medical students in each branch of the kingdom, of establishing uniformly wise and good examinations, which are the key to modern education, and of diminishing the number of the examining boards in the kingdom. Two Governments carried through the House of Lords Bills which would have completed these and other required improvements. A collateral issue as to the construction of the Council raised in 1871 obstructed further progress. In the Council and in the several licensing bodies any complete combination and any finality for examination arrangements have been paralysed by this question. For thirteen years students, teachers, examiners and institutions have been hindered in the attempts they were making at securing in one way or another a sound, permanent, national standard for medical training. Those who have followed the progress of modern biology in all its branches, normal and abnormal, can alone estimate the evil of this suspense. It is quite sufficient to remind you of the names of Brodie, Green, the two Pagets, George Burrows, Thomas Watson, James Arnott, Cæsar Hawkins, Rolleston, the two Woods, Syme, Allen Thomson, Lister, Stokes, William Baly, Sharpey, Parkes, William Lawrence, Teale, Christison, Begbie, Hastings, Rumsey, to recall to your thoughts what a variety of force, what power of goodness, what devotion, what intellect, what public spirit, what self-sacrifice have been during the last twenty-five years thrown within this Council alone into the task of aiming to secure for the next generation, by improved medical education, the welfare of the sick, the health of the nation, the strength of our soldiers and sailors, the progress of natural knowledge, the higher general culture of the medical student, and the social position to be reached by all educated medical practitioners without distinction of place or station. That great improvement has taken place in all these respects no one who knows our medical students will for a moment question. But until the settlement of various disputed questions, which Parliament alone can settle, the Council is unable to ensure for either teachers or students the stability of any sound methods of education upon which agreement can be obtained. It remains for us, as I said last year, until Parliament see fit to relieve us from the labours imposed upon us twenty-five years ago, to continue to labour as faithfully and efficiently as circumstances permit, and, when relieved, to hand over to our successors such work as we have been able to accomplish for the public good, wishing them, with additional powers and the experience of the past, a hearty God-speed. It is possible that this may be the last time that I shall be called upon to address you, except for the most formal business; and in this case, I would wish my very last words to be the expression of gratitude for kindness accorded to me for twenty-five years from the whole Council, for support during nine years as your President, and to leave a record of strong personal affection for many to whom I have for so long owed so much."

The usual returns having been laid before the Council, a report was received from the English Branch Council with reference to the case of Mr. R. A. S. Prosser of Birmingham, against whom certain charges had been made. The Branch Council reported that there were no grounds for finding Mr. Prosser guilty of "infamous conduct in a professional respect." On the motion of the adoption of the report, an effort was made by Mr. Macnamara and other members of the Council to reopen the subject, but it was not successful, and the report was adopted. The Council then considered in private the case of a petition from a medical practitioner to have his name restored to the Register, from which it had been removed, and finally resolved that there were not sufficient grounds for complying with the prayer of the petition. After some formal business the Council then adjourned.

(A fuller report will appear in our next issue.)

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Port of London.—Dr. Collingridge reports that the sanitary work of this port is continuing and is likely still further to increase, and in one instance only, where the vessel being under the Austrian flag it was found necessary to secure the intervention of the Austrian Consul, has any substantial opposition been raised to compliance with the medical officer's requests for improvements, cleansing, &c. Information is given to show the extreme value attaching to the removal of infectious diseases from vessels as they enter the port. Thus in several instances intelligent shipowners have given the port authority notice beforehand to the effect that vessels were expected to arrive with small-pox on board. With this notice the vessels were at once boarded on arrival, the cases removed to the hospital ship *Rhin*, and the necessary process of fumigation carried out on the way up the river. There seems doubt at present whether such a step as this immediate removal can always be enforced, and hence measures are being taken with a view to define more accurately the powers of the authority in this matter. The practice seems the only reasonable one, not only in the interests of the health of the port, but also in those of the shipowners themselves. The ship *Atlas* belonging to the Metropolitan Asylums Board has been removed from her former moorings to much better ones off Purfleet, but near the training ship *Cornwall*. The distance between the two ships is stated to be satisfactory, but, so far as possible mischief is concerned, much will depend on the nature of the communication organised between shore and the *Atlas*. A large amount of meat, amounting to over 1000 carcases of

sheep, belonging to the Government, and which had been placed in salesmen's hands to be disposed of, was condemned and destroyed. It had been sent out to Egypt for the use of the troops there. The jurisdiction of the port district has undergone a change during the year, and below Gravesend it now embraces the whole river up to Trinity high water as far down as a line drawn from the north-east extremity of the Isle of Grain, to the Pilot Mark and the mouth of Havengore Creek, and includes all rivers and creeks, and a part of the Roach River up to Rochford. The boarding station still, however, remains at Gravesend.

Tyne Port.—The sanitary authority for this port has now been constituted a permanent body; it possesses a floating hospital, of which good use has been made, and an adequate staff of officials, at the head of whom is Mr. Armstrong as medical officer of health. Nine patients suffering from infectious diseases were removed from vessels during the past year; three of these were small-pox cases, but, by the aid of revaccination and disinfection of the vessels, clothing, &c., no extension of the disease occurred. The extent of work performed in this port district may be judged of by the fact that as many as 7398 visits of inspection were paid to 6623 vessels, and during the autumn months, when the importation of cholera from foreign ports was feared, the inspectors voluntarily undertook Sunday duty lest any infection should accidentally be imported on that day. The number of vessels, concerning which notices as to cleansing &c. were served, amounted to 506, and, with the exception of eight which left the port before they could be re-examined, all are known to have complied with the requirements laid down. This work represents some amount of vigilance and care concerning the health of nearly 84,000 seamen, who constituted the crews of the vessels concerned, to say nothing of passengers, emigrants, and others; and we congratulate Mr. Armstrong on the success with which he has organised this work, in addition to that which he has to do in the borough of Newcastle-upon-Tyne.

Chester-le-Street Rural District.—Mr. Jackson complains much in his annual report of the difficulties he has to contend with owing to his receiving no proper information concerning the existence of infectious diseases; indeed, many people, fearing the intrusion on their privacy which disinfection &c. involves, persistently keep such diseases secret until they are revealed by death certificates. The death-rate for the whole district has amounted to 21·0 per 1000, it having been as high as 24 and 26 per 1000 in some localities; in others, again, it was below 16 per 1000. The water-supply of the district is stated to be good; but apart from this there is very little information in the report either as to the general sanitary circumstances, or as to advice given with a view to an improvement in the health conditions. The greater part of the report, like so many of those from other districts, is taken up with statistics and with the few measures adopted after infectious disease had actually occurred. The vaccination is stated to be interfered with by reason of parents being able to find practitioners who consent to perform a less protective operation than that performed at the public stations. So long as this lasts, so long must we be prepared to hear vaccination abused as not being in reality the protection against small-pox which it has been asserted to be by Jenner and others.

Keighley.—Mr. A. Roberts in his annual report refers to the manner in which information is withheld as to the existence of infectious diseases in the families of mill hands lest their occupation should be interfered with, and this at a time when the earnings of those who remain healthy are especially wanted because of the sickness amongst other members, and he goes on to discriminate between the danger of allowing persons from infected houses to attend at the mills on the one hand and at schools on the other, believing as he does that when isolation is carried out and disinfectants intelligently applied "there is not any risk at all in the healthy children working at the mills." That there may be a difference as to the extent of danger incurred under the two sets of circumstances named is probable, but we cannot concur in the sweeping statement which Mr. Roberts makes, and which he frankly admits is one with regard to which many will differ from him. Had Mr. Roberts discriminated between the various infectious fevers the matter might have been different, but to express such an opinion, and to declare it as "logically right" when applied to all infectious diseases alike, and this in a district where the protection against small-pox is so very inadequate, is, we think, hasty and calculated to do harm. Had the isolation referred to in every case meant removal from the infected house to a proper hospital for infectious diseases, and were this in all cases followed by such disinfection as would thoroughly deal with all such articles as beds, pillows, and other things difficult of penetration by a high temperature, we could have understood some of Mr. Roberts' confidence in the matter. But we see no reference to an isolation hospital, and are hence bound to assume that none exists. In other respects Mr. Roberts affords very valuable information concerning the sanitary state of the district, and the advice which he gives in detail to mothers concerning the methods by which children may be kept in health comes in very appropriately in a district where out of a total of 768 registered births as many as 125, or over 16 per cent., died within one year of birth.

Herefordshire.—In his report upon the combined urban and rural sanitary districts forming the Herefordshire combination, Dr. H. V. Sandford is able to remind the Town Council of Hereford of his promise that the city should soon rank as one of the most healthy in the United Kingdom, a condition which he asserts has now been attained. The mortality is certainly low—namely, 15·4 per 1000 living; and it is satisfactory to note that a fairly steady decrease in the general mortality has gone hand in hand with a similar decrease in the zymotic death-rate. A similar diminution has taken place in the mortality in the rural district. Both here and in the urban district we would advise that too much confidence should not be placed in death-rates extending over comparatively short periods; indeed, in both these districts a somewhat marked rise has occurred during some portion of the period for which a steady diminution is claimed. Viewed as a whole, the report deals fully with mortality statistics and with action taken as regards actual prevalences of infectious diseases; but there is a somewhat marked absence of any sufficient information as to the action taken and the advice given with a view of preventing the occurrence of such diseases. The action of a medical officer of health in preventing the spread of disease which is already prevalent is of the utmost importance, but, so far as we can judge from records in annual reports, it appears to us that in many instances the far more important action which should be taken with a view to prevent the possibility of occurrences of disease such as can be prevented by a proper sanitary administration is being lost sight of. Dr. Sandford, in recording analysis of milk in the borough, regards a sample containing 9 per cent. of solids as of a "very fine quality."

Bath.—Dr. Brabazon in reporting on the health of the city of Bath for the year 1882 points out that the death-rate of 20 per thousand of the population is artificially high because of the large number of persons who become residents at an advanced age, the city being indeed a "cradle of old age." The infantile mortality is certainly below the average, that occurring under one year of age amounting to 12 per cent. of the births registered. There has also been an almost continuous diminution in the mortality from infectious diseases for a series of years. During the past year scarlet fever has been somewhat prevalent, but Bath has wisely provided itself with a hospital for infectious diseases, and it has been of the greatest service to the town. The hospital is styled the Statutory Hospital, a name which savours rather strongly of compulsory removal under powers conferred by statute; it is situated in one of the most charming spots amongst the many picturesque localities in the vicinity of Bath, and last year as many as 109 scarlet fever patients were admitted. A number of cases were unfortunately heard of too late to admit of their removal to the hospital, and they constituted centres of infection which it was very difficult to control. Hence Dr. Brabazon strongly urges the Corporation to take action for securing a system of compulsory notification of infectious diseases, a process which we trust will be rendered more easy as the result of the legislation of the present session. It is often found difficult to quote trustworthy statistics as to the respective mortalities in and out of infectious hospitals, and this mainly so because poor parents are often willing to send severe cases to hospital, whilst they see no such necessity in the case of mild attacks, especially of scarlatina, and hence the hospital mortality becomes artificially raised. At Bath, however, the result of hospital isolation has in this sense been eminently satisfactory, for whereas the mortality amongst 95 scarlet fever patients treated at home amounted to 22·1 per cent, that amongst the 109 received into the infectious hospital was only 4·5 per cent.

Bedford (Urban).—The medical officer of health for the

municipal borough of Bedford (Dr. Charles E. Prior) has issued his annual report for last year. He estimates the population of his sanitary district, after deduction of inmates of institutions not being borough residents, at 19,616 persons; this number is probably somewhat under estimated, as we observe that Dr. Prior calculates his increase arithmetically instead of geometrically. It should always be borne in mind that population increases at compound and not only at "single interest." Notwithstanding this probable under-estimate of the population, the death-rate of the borough is given at but 15·3 per 1000, showing a slight further decline from the exceptionally low rate (15·6) in 1881. Dr. Prior appears to have made very careful corrections for the deaths of non-residents, taking into account, however, all the deaths belonging to the borough in the Three Counties' Lunatic Asylum. The birth-rate in the borough was also low, only a little over 27 per 1000, and it is stated to be somewhat below the average. The low birth-rate indicates an age constitution of the population adverse to a low death-rate, which gives additional value to the low death-rates that prevailed during 1881 and 1882 as evidence of a satisfactory sanitary condition. The proportion of infant mortality was equal to 13·6 deaths under one year of age to each 100 births registered. This is the most unfavourable feature in the return before us, the proportion being excessive, having regard to low death-rates at other ages. Dr. Prior's observations on the mortality of childhood and other age periods would acquire additional value if his calculations were based upon the numbers living at each age period instead of being the proportions of deaths to total deaths, which are not trustworthy. The rate of mortality from zymotic diseases did not exceed 1·5 per 1000 in Bedford last year; the deaths from these diseases included 9 from diphtheria, 8 from whooping-cough, and 7 from diarrhœa. Diphtheria has been in recent years the most fatal zymotic disease in Bedford. The town, however, has the advantage of a hospital for infectious diseases, and 4 of the 9 deaths from diphtheria were registered there last year. Dr. Prior has good cause to congratulate his sanitary authority on the main features of his report; and if the rate of infant mortality can be reduced (as we believe it may), we see no reason to doubt a continuance of these favourable returns.

Bedford (Rural).—It is undoubtedly advantageous to the sanitary condition of the district that both the urban and rural sanitary districts are under the professional care of one medical officer of health. Dr. Prior is probably correct in estimating the population of the rural district to have been stationary since the last census, and at 23,612 after correction for inmates of institutions. The birth-rate in 1882 appears to have been equal to 30·3 and the death-rate to 17·2 per 1000 of the estimated population. It is worthy of remark that both of these rates were higher than those recorded in the borough or urban district. Infant mortality, however, was much lower, and did not exceed 11·2 per cent. of the births registered, against 13·6 in the borough. The zymotic death-rate, on the other hand, was slightly higher, and equal to 1·6 per 1000 persons living. Diphtheria was in the rural, as in the urban, district the most fatal zymotic disease in 1882, causing seven deaths. Mention is also made of two local village outbreaks of enteric fever, to which disease, however, only two deaths were referred. The most careful investigation into the causation of those outbreaks appears to have been made. It is to such local investigations, and the sanitary progress which results from them, that must in a great measure be attributed the marked improvement in the public health which has resulted from the operation of the Public Health Acts of 1872 and 1875.

THE SMALL-POX EPIDEMIC AT NOTTINGHAM.

At the meeting of the Nottingham Health Committee on the 8th December, 1882, the following resolution, which had been prepared by the town clerk, was moved by the chairman, seconded by the vice-chairman, and carried unanimously:—"That this committee desire to record its sense of the tact, judgment, and energy displayed by Dr. Seaton, the medical officer of health for this borough, in dealing with the recent outbreak of small-pox. He has secured compliance with the provisions of the local Act, requiring notification of infectious disease, and has induced a large number of persons to be vaccinated. He has also succeeded in carrying on the necessary means for proper isolation, and for removal to the hospital of the sick, where necessary, by persuasion, and without recourse to legal proceedings. The committee desire to record their high appreciation of the manner in which this has been done by the medical officer of health, assisted by Mr. Richards, the chief inspector of nuisances, whose services are deserving of the warmest praise."

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns, 5986 births and 4085 deaths were registered during the week ending the 14th inst. The annual death-rate in these towns, which had been equal to 29·2 and 26·1 in the two preceding weeks, further declined last week to 24·7. During the thirteen weeks of last quarter, the death-rate in these towns averaged 23·8 per 1000, against 25·5, 23·9, and 24·7 in the corresponding periods of 1880, 1881, and 1882. The lowest rates last week in these towns were 16·9 in Bristol, 18·5 in Leicester, 19·2 in Newcastle-upon-Tyne, and 20·1 in Derby. The rates in the other towns ranged upwards to 30·1 in Liverpool, 30·5 in Manchester, 33·2 in Blackburn, and 34·0 in Hull. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 406 and 363 in the two preceding weeks, rose to 377 last week; of these 108 resulted from whooping-cough, 89 from measles, 63 from scarlet fever, 57 from "fever" (principally enteric), 29 from diarrhœa, 27 from diphtheria, and 4 from small-pox. The lowest death-rates from these diseases occurred last week in Brighton, and the highest rates in Liverpool and Hull. Whooping-cough showed the largest proportional fatality in Plymouth and Hull; scarlet fever in Leeds and Sheffield; measles in Sheffield and Liverpool; and "fever" in Blackburn. The 27 deaths from diphtheria in the twenty-eight towns included 20 in London, 3 in Liverpool, and 2 in Birmingham. Small-pox caused 2 deaths in London, one in Leeds, and one in Sunderland. The number of small-pox patients in the metropolitan asylum hospitals, which had declined from 97 to 82 in the four preceding weeks, rose again to 85 at the end of last week; 14 new cases of small-pox were admitted to these hospitals during the week, against 13, 11, and 7 in the three previous weeks. The deaths referred to diseases of the respiratory organs in London, which had been 672 and 612 in the two preceding weeks, further declined last week to 532, but exceeded the corrected weekly average by 80. The causes of 118, or 2·9 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Plymouth, Derby, and Cardiff. The proportions of uncertified deaths were largest in Liverpool, Wolverhampton, Norwich, Oldham, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been equal to 30·4 and 29·4 in the two preceding weeks, further declined to 27·9 last week, but exceeded by 3·2 the mean rate last week in the twenty-eight English towns. The rates in the Scotch towns ranged from 17·1 in Aberdeen and 18·7 in Perth, to 29·8 in Greenock and 33·6 in Glasgow. The deaths in the eight towns included 112 which were referred to the seven principal zymotic diseases, showing a decline of 11 from the number in the previous week; these deaths were equal to an annual rate of 4·7 per 1000, which was as much as 2·7 above the mean rate last week from the same diseases in the large English towns. The deaths referred to whooping-cough, which had been 43 and 48 in the two preceding weeks, were 47 last week; 20 were returned in Glasgow, 10 in Edinburgh, 6 in Leith, and 6 in Dundee. The 21 fatal cases of measles were 6 less than the number in the preceding week, and including no less than 16 in Glasgow. Of the 12 deaths referred to diphtheria, 7 were returned in Glasgow. The fatal cases of "fever," which had been 13 and 12 in the two previous weeks, further declined to 8 last week, of which 3 occurred in Glasgow and 2 in Aberdeen. Of the 9 deaths from scarlet fever, 7 were returned in Glasgow. The deaths from acute diseases of the lungs in the eight towns were 162, showing a slight increase upon the number in the previous week, and were 25 above the number returned in the corresponding week

of last year. The causes of 109, or more than 16 per cent., of the deaths registered in the eight towns were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 43·0 and 40·3 per 1000 in the two preceding weeks, further declined to 32·8 in the week ending the 14th inst. During the thirteen weeks of last quarter the death-rate in the city averaged as much as 35·2 per 1000, whereas it was but 22·1 and 21·1 in London and Edinburgh respectively. The 220 deaths in Dublin last week showed a decline of 70 from the number returned in the previous week, and were lower than in any week since the end of January; they included 11 from "fever," 5 from whooping-cough, 3 from diarrhœa, and not one either from small-pox, measles, scarlet fever, or diphtheria. Thus 19 deaths were referred to these principal zymotic diseases, against 31 and 28 in the two previous weeks; they were equal to an annual rate of 2·8 per 1000, against 2·1 in London and 3·5 in Edinburgh. The deaths referred to fever, which had been 13 and 12 in the two previous weeks, further declined to 11, but were equal to a rate of 1·6 per 1000, which was eight times as great as the rate from the same disease in London. The 5 fatal cases of whooping-cough also showed a considerable decline from recent weekly numbers, and were fewer than those returned in any preceding week of the year. The deaths both of children and of elderly persons were below those in recent weeks. The causes of 27, or more than 12 per cent., of the deaths registered during the week were not certified.

A NEAPOLITAN PRIVATE ASYLUM.

I WAS recently under the necessity of paying daily visits for a month to the Manicomio Fleurent at Naples; and perhaps an account of this establishment may not be uninteresting to readers of THE LANCET. Owing to the courtesy of Signor Aveta, the director, I had excellent opportunities of making myself acquainted with the general working of the asylum. Situated on the outskirts of Naples, in the Capo di Chino, where there is a continual flow of traffic to and from the inland—carts laden with fruit, vegetables, and corn, flocks of goats, herds of cattle, peasants going and returning from their work, the jingling of bells, and the merry laughter and *badinage* of Southern Italian life—the scene from the front of the asylum is always animated and gay. The air is very pure and soft, and the water-supply is good and abundant—a matter of some importance in this part of the world. The buildings form three sides of a square, with a fourth block midway between the two wings, the frontage forming the base. The rooms are of good size and well lighted, and the corridors spacious. There is a *salon* for the better class of convalescents, a music room, and a small theatre. Billiards, chess, and dominoes, as well as gymnastics, are allowed for those for whom it is fitting. There is also a small chapel, the use of which is rather sparingly allowed, and is especially forbidden in cases of *monomania ascetica, o anti-ascetica.* Lectures for the better class and lessons for the ill-educated are also given.

Admission is by a medical certificate, stamped and *visé* by the municipal authority. A form corresponding to our "statement" is also filled in by the physician and friends. The questions asked are, however, of a much more comprehensive character than in those in the statement—to wit, as to the patient's temperament, habits, education, moral character, sensuality, sobriety, mental overwork, hallucinations (external of the five senses, internal *della vita fisica*), with many others. The terms range from 500 lire to 100 lire a month. In the first class special the patient has a sitting-room and bedroom, special attendant, "very sumptuous" diet, cigars, and tobacco furnished him, ices every day in summer, and a drive in a two-horse carriage twice a week. In the second class special (350 lire a month) the diet is "sumptuous," the prospectus says; there is a special attendant, and one room furnished and entirely separate, two ices a week in summer, cigarettes, and carriage drive *a due cavalli* twice a month. In the ordinary first class (220 lire a month) the patient has a private room, and breakfasts, dines, and sups in private. In the second ordinary (160 lire a month) he shares his room with another, and takes his meals at *table d'hôte.* The third class ordinary (100 lire a month) sleep in a dormitory, and dine in the refectory.

Hydrotherapy, as in most continental asylums, is much in use here, but only by order of the visiting physician, Professor Limoncelli of the University of Naples, and under the supervision of the director. The bathing arrangements, warm, cold, shower, douche, vapour, perineal, &c., as also the appliances for bathing violent patients, are well contrived. The prolonged use of the warm bath with cold to the head is a favourite method of relief here. There are four rooms with tinted glass—blue, yellow, green, and red. The blue tint has a soft and pleasing effect, and is found beneficial for maniacal patients; and the gay and cheerful effect of the yellow is well adapted for melancholic patients. The eyes are rather pained, however, by the green tint, and the red is never used; the terrible glare of it is maddening in itself, I should say.

Mechanical restraint is used—the camisole, a species of leather muff (for masturbators), and strapping down in the case of very violent cases. Our system of physical restraint, more euphemistically known as non-restraint, is not employed here. "Ah, c'est une espèce de lutte, n'est-ce pas?" said the Director to me, with some irony, when I spoke to him of our so-called non-restraint, and I was quite unable to convince him that a struggle with half a dozen keepers had no element of restraint in it, or that a raving lunatic could be "morally degraded" by being mechanically restrained from injuring himself or others, or that the chances of bruises and broken ribs were not increased tenfold in these struggles, or that human nature being what it is, and keepers keepers, a blow or a kick from a violent patient was not likely to bring about some such retaliation as a little extra "twist" or "pressure" which often led to serious consequences.

The chief fault about the Manicomio Fleurent is the limited space of ground for exercise. Amongst Southern Italians, however, this want is not much felt, and the spacious corridors doubtless afford an equal protection from the summer sun and the winter cold.

FRASER NICOLSON, L.R.C.P. ED.

THE SERVICES.

ARMY MEDICAL DEPARTMENT.—Surgeon-Major Alfred John Belemore has been granted retired pay, with the honorary rank of Brigade Surgeon. Surgeon-Major John Edward Purdon, M.B., half-pay, has been granted retired pay. Surgeon John Lichenstein Ritchie resigns his commission.

ADMIRALTY.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Inspector-General of Hospitals and Fleets Thomas Colan, M.D., has been placed on the Retired List from the 14th inst.

The following appointment has been made:—Staff Surgeon John C. B. Maclean, to the *Satellite.*

Correspondence.

"Audi alteram partem."

"THE PICRIC ACID TEST FOR ALBUMEN."

To the Editor of THE LANCET.

SIR,—In reply to Dr. Kirk's letter on the above subject allow me to say that, so far as I am concerned, he is at liberty to claim as his own the method of testing for albumen by a solution of picric acid; but he will probably have to settle accounts with more than one other claimant for that insignificant kind of priority.

The concluding paragraph of his letter begins with the statement that "Dr. Johnson must have been quite ignorant of the existence of my paper, and it is to be presumed his son was equally so." Yet, unless I misinterpret his language, he insinuates that the idea of pouring a solution of picric acid on the surface of the urine is too brilliant and original to have occurred to two independent observers, and that therefore I must have borrowed it from him. I beg therefore

to say that until we read Dr. Kirk's letter my son and I were "quite ignorant of the existence" of his "buried" paper. I also repeat my original statement, that I was induced to use picric acid as a test for albumen by my son's suggestion. The suggestion was first made several years ago, and from time to time it was repeated; but it was not until about two years ago that I began to act upon it, and I have now to express my regret that I did not sooner recognise the value of the test. It was not until I had ascertained by numerous trials that a saturated aqueous solution is a most delicate and therefore valuable test for minute traces of albumen, and that the powder may advantageously be substituted for nitric acid in a pocket test case, that I felt called upon to publish my experience of its use.

If Dr. Kirk will refer again to what he is pleased to call "some jubilant remarks" in the *British Medical Journal* of March 17th, he will find that the short article in question relates mainly to my account of sugar testing and analysis by picric acid and potash. Perhaps, however, he considers that his paper published two years ago entitles him to the credit of all that has been done with picric acid as a clinical test both before and since the publication in question.

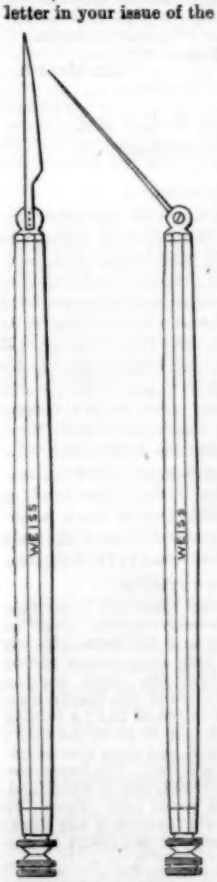
I am, Sir, yours faithfully,

Savile-row, April 16th, 1883. GEORGE JOHNSON.

"A NEW OPERATION FOR CATARACT."

To the Editor of THE LANCET.

SIR,—I have read with much pleasure Dr. Bell Taylor's letter in your issue of the 7th inst., which bears out the fact I had already pointed out, that the so-called "new operation" for cataract had been frequently performed in this country. My present object, however, in writing is to show that the difficulties experienced by Dr. Bell Taylor have also been shared by myself, and led me some five years ago to have constructed by Messrs. Weiss and Co. a knife, to which Dr. Taylor's, as figured in THE LANCET of April 7th, bears many points of resemblance. In my instrument, by means of a little screw at the end of the handle, the blade can be set at any angle to the handle, and thus the right hand can be used for operating upon the left eye from behind. One knife, therefore, is only necessary for either eye. A structural difficulty, however, sometimes renders the use of the knife impossible for the left eye, and that is want of space between the inner margin of the cornea and the bridge of the nose, and this difficulty of course becomes greater in proportion to the length of the knife's blade. I find on measurement that the length of the blade in Dr. Taylor's knife is a little over one inch and a quarter, and as the average distance between the inner margin of the cornea and the bridge of the nose is scarcely more than one inch, it would be impossible in many cases to introduce the point of the knife into the cornea without considerable outward rotation of the globe. To obviate this difficulty, the blade of my knife is made a little under one inch in length. Still I meet with many cases in which it is difficult to use it, and I think it might be further shortened with advantage.



I am, Sir, yours &c.,

Newcastle-on-Tyne, April 10th, 1883. C. S. JEAFFRESON.

INTRA-PERITONEAL INJECTIONS IN CASES OF POISONING.

To the Editor of THE LANCET.

SIR,—It would, I think, be difficult to over-estimate the value of Dr. Ringer's suggestion, that the injection of saline solutions should be resorted to in cases of poisoning. It is generally supposed that the introduction of fluids into the peritoneal cavity is an operation attended with considerable risk, but the experimental observations of Ponfick and of Bizzozero and Golgi have shown that defibrinated blood can be injected into the abdomen with little or no danger. Ponfick relates that in one case 250 grammes of blood were transfused, in another 350, and in a third 220 grammes. The results were most satisfactory, the only unfavourable symptoms being a little tenderness of the abdomen and a slight and transitory elevation of temperature.

Recently, I have had occasion to resort to intra-peritoneal injection six times, and in four instances I have used Ringer's solution with much benefit. The only apparatus employed was the cannula of the aspirator, attached to a piece of indiarubber tubing, the fluid, warmed to the temperature of the body, being allowed to run in by syphon action. The cannula was pushed through the abdominal wall on one side, no special antiseptic precautions being taken. The first injection measured 500cc., or about fifteen ounces, the second half that quantity, and the third 600cc. In a case of peritonitis in a child, serous fluid to the amount of 320cc. was drawn off by the aspirator, and the peritoneum was then washed out with 400cc. of the salt solution. The temperature on the following day rose to 102°, but with this exception there were no unfavourable symptoms.

In cases of emergency it may not be practicable to prepare Ringer's solution in exact accordance with his directions; but the following formula, which is almost identical with that recommended by him, can be quickly dispensed:—Common salt, one drachm; bicarbonate of soda, four grains; chloride of calcium, three grains; chloride of potassium, one grain; water, twenty ounces, at a temperature of 100° F. This may be used either for intra-venous or intra-peritoneal injection.

I am, Sir, your obedient servant,

WILLIAM MURRELL, M.D.

Weymouth-street, W., April, 1883.

NOTE ON THE INFLUENCE OF DEFLECTION OF THE NASAL SEPTUM ON THE SINGING VOICE.

To the Editor of THE LANCET.

SIR,—At the last meeting of the American Laryngological Society (*Archives of Laryngology*, Jan. 1883), in the course of a lengthy discussion on "The Singing Voice, its Physiology, Pathology, and Treatment," the question of the influence of deflection of the nasal septum on the tone and quality of the voice was raised, and some difference of opinion was expressed whether any alteration was produced by the deflection, and whether any improvement was the result of the reposition of the septum and the consequent restoration of free nasal respiration. In all the cases that have come under my care the voice has been impaired, and considerable improvement has been the result of treatment; but I would more particularly refer to the case of a gentleman whose septum I straightened about a year ago. He had suffered from obstructed respiration in the affected nostril as long as he could remember, and for the last few years had been quite unable to sing. The septum, which was strongly bent to the right side, was forcibly straightened, the septal cartilage being at the same time divided in a stellar manner by means of a tenotome to overcome its resiliency, and maintained in position by retentive apparatus. The improvement in this case was most marked. The nasal intonation was lost, and he tells me that he is now able to sing with pleasure, and that his friends consider that he has a very good voice.

I am, Sir, your obedient servant,

W. J. WALSHAM, F.R.C.S.

Weymouth-street, W., April, 1883.

McCAW'S "CRANE-AGRAFE" v. ORMSBY'S "CRANIUM HOLDER."

To the Editor of THE LANCET.

SIR,—Referring to Dr. Ormsby's letter in THE LANCET of the 14th inst., kindly allow me to say that he has had the discourtesy—I am sure unintentionally—to give the *makers* and not the *inventor* credit for suggesting the "Crâne-Agrafe," which you were good enough to notice for me in your issue of the 7th inst. I am the inventor of the instrument, which, in my opinion, bears not the slightest resemblance to Dr. Ormsby's "Cranium Holder" (as he is now pleased to call it), which a medical friend informs me was formerly dignified by the name of "Corona," but which, from some cause or other, has not come into general use either in the medical schools or the hospitals. Dr. Ormsby's "Corona" and my "Crâne-Agrafe" are now before the profession; and I leave it with them—the most unprejudiced and competent judges—to pronounce an opinion as to which of the instruments is the better one. I have to thank Messrs. Mayer and Meltzer of Great Portland-street, W., for the great care and trouble they took in making for me such a perfect and beautiful instrument as the "Crâne-Agrafe" really is.

I am, Sir, yours truly,

Portglenone, Belfast, April 16th, 1883. J. D. McCAW.

APOTHECARIES' HALL, LONDON.

To the Editor of THE LANCET.

SIR,—The letter of "A Candidate" on the subject of the Examinations of the Society of Apothecaries in your journal of the 14th inst. would be unworthy of notice, if it were not for a note of yours that "the fact he states is one of great significance." But what he states as a "fact" is not the fact, which he might have known by referring to your journal of January 20th last. Instead of doing so, he invents numbers to square with his no less erroneous assertion that "they [the Society of Apothecaries] have now suddenly raised the standard of one of their examinations at least to an absurdly high level." Affirming that "at the last January Examination in Arts they passed only 23 out of 115 candidates," or 1 in 5. Now, as a matter of fact, 37 passed out of 110, or 1 in 3. Nor are we singular in this large per centage of rejections, for the same is observed, it is sad to relate, in all public examinations.

The motive which pervades the letter is too apparent for comment. It is quite true, and it should be made known, that the standard of the examinations at the Hall, both in Arts and in Medicine, has been materially raised compared with former years. But it is not true that it has been raised "in view of the new Medical Act," but was brought into operation long since to meet the requirements of the age. And there is every desire on the part of the Society to advance yet further in the path they have so many years pursued.

Your obedient servant,

T. PEREGRINE, Sec. *pro tem.*

Apothecaries' Hall, April 18th, 1883.

MAIL LINES TO THE WEST INDIES.

To the Editor of THE LANCET.

SIR,—Some time back there was an inquiry in your columns respecting the above subject. I can furnish a few particulars.

In my own case, on getting out there, I was transferred to an inter-colonial boat that did the following work:—Once a month she ran up and down certain islands, calling at each somewhat in the manner of a penny steamboat, and taking three days' run each way. The rest of the month was spent lying in harbour in a foreign possession. This is always an expensive thing, and there was no chance of making any fees whatever. This ship happily was paid off, and I was to be sent home, with some of the other officers, as passenger. Being subsequently ordered to go on another ship I refused, as I had a perfect right to do. Next day, the company's superintendent sent for me, and in the presence of the captain told me that I had made myself amenable to the law, and could be "lodged in the fort." Being asked if he threatened me with the fort, he replied that he did not threaten: but I pointed out to him that, standing in our then relation, his mention of the fort could not be held otherwise than as a threat. He then spoke about the inconvenience they had been put to, when I pointed out that that was a matter of sentiment, and putting things on a very different ground. This is a specimen of the "Royal" way in which the profession is treated. The theory seems to be that they "must get more hold over the doctors."

I may mention that it was by the merest accident that I escaped being put on a small cargo-boat with few or no passengers; knocking about from place to place to pick up cargo; and finally running up to New York. If, as must sometimes happen, there be an unpopular captain, or an uncongenial set of officers, life under such conditions must be little better than that of a prison. Personally, I was very fortunate in the matter of captains and brother-officers.

From the date of being paid off in the West Indies to the date of leaving the company's service, I am offered the magnificent sum of two-and-sixpence a day, an arrangement known as "harbour-pay." I sent in a claim for full pay up to reaching Southampton, and have no doubt that I can do so legally. But the company may pretty safely conclude that not many young surgeons would have either the time, means, or inclination to bring an action, involving, as it would, a journey to the local County Court.

I could add a good deal more; for instance, there is a compulsory insurance at an exorbitant rate, even when, as in my case, one is already insured; but what I have said is enough to give an idea of this truly "Royal" service. My strong advice to anyone meditating a voyage in it is somewhat similar to that of *Punch* on an oft-quoted occasion.

I am, Sir, yours truly,

April, 1883. EL MEDICO.

NEWCASTLE-ON-TYNE.

(From our own Correspondent.)

SEA-WATER FOR NEWCASTLE.

THE scheme for supplying our city with sea-water, promoted by a public company, is being actively opposed in Parliament by our Corporation. It must be admitted, however, that Newcastle, considering its large population, is very deficient in baths and washhouses, now admitted to be necessary in all large towns. The new company seeks to supply us with pure sea-water brought from Whitley, but the Corporation objects to our streets being taken up for the purpose. The excuse is not a very good one it is felt here, because, should the company take up the streets, surely the Corporation could compel it to put them down again. It is to be hoped that the Corporation may abandon the "dog in the manger" policy, and allow the Sea-water Company to proceed with the works. Gateshead, in the matter of public baths and washhouses, is much in advance of Newcastle, and in this respect it has one of the most complete and well-regulated establishments in the kingdom.

A FEVER DEN AT SPENNYMOOR.

Dr. Anderson has reported to the Auckland Guardians that a family had been affected with typhus fever at Spennymoor. He found the man and his wife lying on a filthy bed covered with a few dirty rags, and a girl of twelve, herself just recovered from the fever, waiting upon them. Three days later two more of the family were down, and the whole were laid in the same bed; a woman living in the house also took it, and had to lie on the floor; her husband, through nursing his wife and from also assisting the girl, contracted the malady and died. The house was a wretched hovel, consisting of two rooms, one of which had an earthen floor and the other was paved with bricks. It was very badly lighted and had no convenience of any kind. The authority decided to send a copy of the report to the Local Government Board.

SMALL-POX AND NEGLECT OF VACCINATION AT JARROW.

At a late meeting of the Jarrow Town Council it transpired that there was an outbreak of small-pox in the town, twenty-six cases being under treatment. The present tem-

porary hospital is reported as inadequate for the requirements of the cases, and the sanitary committee recommended its enlargement. Dr. Munro reported that there had been great neglect of vaccination among the cases, and the Council gave him immediate power to look after the matter. As showing how grossly careless some poor people are about infection, it was mentioned to me in connexion with this outbreak that a patient whose bed had been destroyed had a new one given her at the expense of the Corporation. This new bed in its turn became infected, and the woman sold it; thus the disease was spread about the town.

THE INFIRMARY.

The information in a previous letter which I sent you as to the probability of our infirmary being made a free hospital has, after some very favourable comments on the proposed change by our local papers, been contradicted by the infirmary authorities saying that the governors have "not yet considered the proposition of making the infirmary a free hospital." I do not know how the mistake occurred, because it was not a mere rumour which I sent you, but direct information from a member of the infirmary staff. "Coming events," we know, do sometimes "cast their shadow before" them, more than hospital governors like to admit, and the disappearance of the infirmary itself from its present objectionable situation is not unlikely before long "to come within range of practical" improvements.

SUDDEN LOSS OF HAIR FROM FRIGHT.

I saw lately at one of our special hospitals an example of loss of hair from mental emotion. The patient was a man aged thirty-nine, and under treatment for an aural affection. It was noticed that he wore a wig, and was completely bald. On inquiry into the case, he stated that up to five years of age he had a good growth of curly hair, but when playing in bed with his mother the bed accidentally caught fire. On hearing the screams of both, his father came into the room, and he sprang into his arms from a distance that was considered very great for a child of his age. From this time his hair fell out, and never grew again.

THE EYE INFIRMARY.

The annual meeting of our Eye Infirmary has just been held; and this institution is distinguished by the large amount of work which it does for the poor in a very quiet way. The financial report showed that the funds were in a very satisfactory state, while the medical statement proved that a gradually increasing number of patients seek the advice of the staff. Some discussion took place as to the necessity of extending the scope and usefulness of the charity by taking larger premises, and thus providing for the accommodation of out-patients, as well as for the reception of in-patients; and Mr. Jeaffreson was directed to prepare a report to be presented to a future meeting shortly to be held on the subject.

Newcastle-on-Tyne, April 16th, 1883.

GLASGOW.

(From our own Correspondent.)

UNIVERSITY COURT APPOINTMENT.

IT was noticed in last week's LANCET that Glasgow University Court had appointed as an extra examiner in Chemistry and Materia Medica a gentleman who has no connexion with the profession. The Court has arranged this difficulty satisfactorily by requesting Dr. R. Perry, who was the last examiner in these subjects, to continue to act as assessor in Materia Medica and Therapeutics.

UNIVERSITY RECTORIAL ELECTION.

The University Rectorial election next November promises to be one of the most keenly contested of recent years. To the candidates already announced—the Marquis of Bute for the Conservatives and Mr. Fawcett for the Liberals—the University Independent Club has added a third in Mr. John Ruskin, who has given his consent to his nomination. Mr. Ruskin was rejected by the students in 1880, mainly, it is said, because he was the joint nominee of the Conservative and Independent Clubs, many who really held independent principles refusing to contribute to what would have been regarded as a Conservative victory. Next November, however, he comes before the students on his own merits as the nominee of the Independent Club alone.

GLASGOW PRACTITIONERS AND THE MEDICAL BILL.

The Glasgow Medico-Chirurgical Society called a meeting last week in the Faculty Hall, to which the practitioners in the city and neighbourhood were invited, for the purpose of considering the Medical Bill. The meeting was largely attended. The following are the resolutions passed:—"That this meeting approve of the Medical Bill in so far as it provides for the formation of a conjoint board in each division of the kingdom to examine all candidates seeking registrable medical licences. That this meeting is of opinion that the profession should have direct representation not only on the Medical Council, but also on the Divisional Boards, and that in Scotland the profession should elect four of the eleven members of the board, thus giving to the universities four members, to the corporations three members, and to the profession four members. That this meeting is of opinion that when the Examining Board is instituted there should be a rule that no candidate for the diploma of the Board be examined by any member of the Examining Board who may have been his teacher on that subject."

MEDICAL CORRESPONDENCE IN THE LAY PRESS.

There has been much lively, if uninstructive, reading of a medical kind in the Glasgow papers of late. Scarcely a day passes ungraced by the appearance of some "elegant extract" in the way of letter or statement by medical men. The chloroform question, which served to light up animosities which have been smouldering for years in the Royal Infirmary, gave rise to quite a crop of these communications. More recently we have been treated to a heated correspondence arising out of some statements made at the meeting of the profession to consider the Medical Bill, the disputants indulging in personalities anything but edifying. There has been more than enough of this kind of "dirty linen" washed in public here during the last two months.

GLASGOW SOUTHERN HOSPITAL.

The committee appointed to select plans for the erection of this new hospital have awarded the premium at their disposal to a firm of architects in Glasgow. These plans having now been approved, the erection of the buildings will go on as soon as sufficient funds are forthcoming. It is said, perhaps as a joke, that the late chairman of the Royal Infirmary Board is to be asked to take up this scheme; if he does, the success of the undertaking may be regarded as certain.

THE CHLOROFORM QUESTION AT THE ROYAL INFIRMARY.

At a recent meeting of the committee of managers of the Royal Infirmary appointed to consider the chloroform question replies were submitted from nearly all the large hospitals in the kingdom with reference to the practice of administering chloroform in each. As the committee were unable to come to any definite resolution on the question at issue, copies of the reports were sent to the staff of the Infirmary, with the request that two of their number should be appointed to confer with the managers.

SCOTTISH NOTES.

(From our own Correspondent.)

ZYMOTIC DISEASE.

DURING last month sixty-one deaths from zymotic disease occurred in Dundee. Of this number thirteen belonged to the select class, whose existence is now notified to the medical officer of health, and forty-eight were cases of infectious disease ignored by the authorities.

NARROW ESCAPE.

While a female lunatic was being conveyed to the Dundee Asylum last week, she made an attempt at escape in Perth Station. While crossing the rails, followed closely by the attendant, both were knocked down by a passing train; but though the whole train passed above them neither received the slightest injury.

DR. MATTHEWS DUNCAN AND SCOTCH MORALITY.

Certain statements made by Dr. Duncan, in the "Gulstonian Lectures" published in THE LANCET last week, have

occasioned intense pain to many of his countrymen, who do not hesitate to say that Dr. Duncan has been misled into uttering a gross libel upon the morals of a respectable class in the community. I am not acquainted with the social condition of the Welsh peasantry, but have confidence in stating that no such grossness is known in Scotland, not even in the district, most noted for its immorality, with which Dr. Duncan is presumably best acquainted. Members of the class referred to, when shown the remarks, were simply horrified, and indignant in their denial.

AN EXTRAORDINARY MARRIAGE CASE.

The Aberdeen courts have recently had a very peculiar consanguinity case before them, and the latest decision is that the point raised cannot be settled in Scotland except by the Court of Session. The circumstances are these:—A certificate was asked from the registrar for the marriage of James Dyer and Elspeth Tosh; the Free Church minister objected on the ground that the woman was the daughter of a son of Dyer's deceased wife; the objection was afterwards withdrawn, but the registrar held that the certificate could not then be granted without an order of court. The Sheriff-Substitute, and now the Sheriff, decide that they have no power at common law to deal with the question raised. The Sheriff personally leans to the view that the marriage is within the prohibited degrees; but the peculiarity which makes this case unique is the fact that the woman is illegitimate, and therefore the tie between her and the deceased wife is through the putative father. The Sheriff thinks the objection stated a very formidable one, and deems the registrar's action quite in accordance with the statute, even though the objection was withdrawn. It is expected that the case will go to the Court of Session for a definite decision.

ST. ANDREWS UNIVERSITY.

It was scarcely to be expected that the authorities at St. Andrews would view with equanimity their probable extinction under the Universities Bill as it at present stands. They have at once determined on an energetic protest, as will be seen from the following resolution adopted by the Senatus Academicus on Saturday last:—"The Senatus hail with satisfaction the introduction of a Bill for the better administration and endowment of the Scottish Universities and the proposed appointment of an Executive Commission entrusted with powers for the above purpose. But while approving of these general objects of the Bill, after consideration of the clauses thereof which have a direct bearing on the University of St. Andrews as embodied mainly in Clauses 8 and 18, the Senatus unanimously agree that the retention of Section 4 under Clause 8 would be most injurious not only to the interests of the University but to the higher education of Scotland, and they therefore unanimously resolve to use every means in their power to have this section struck out of the Bill, and with a view thereto at once to memorialise the Government and Parliament to that effect." A public meeting to protest against these clauses will be held this week, and the General Council will discuss the matter on the 20th.

THE MEDICAL BILL.

The examinations now being conducted at the various Universities have proved a godsend in the discussion of the Bill which now absorbs the attention of the profession. The daily luncheons and the nightly dinners resemble debating societies, and good listeners are at a premium. Perhaps on no former occasion has the hospitality of professors been more profusely shown to the outsiders, who come down as assessors; and could the notes be but printed, they would form choice morsels. Amidst all this, however, there is a decidedly better feeling manifested towards the present than to any former Bill, and an earnest search for a basis of compromise is being made. Many believe that this has been found in the statement issued by a joint committee of the medical faculties, a statement which scarcely needed the signatue of the energetic professor of anatomy at Aberdeen to show its origin. Graduates of all the Scottish Universities are indebted to Dr. Struthers for the able defence he has made of their interests; and he has shown that these coincide alike with those of the public and of higher medical teaching. The action of the extra-mural teachers at Glasgow is quite consistent with their pecuniary interests; but I should imagine that Professor Gairdner felt his position in the chair somewhat irksome. It was a clever move to secure such a distinguished figure-head; but Dr. Gairdner is, above all things, cautious, and his reticence was probably disappointing to the wire-pullers.

PARIS.

(From our Paris Correspondent.)

THE LUNACY LAW.

THE French law of 1838 relative to the disposal of lunatics not being considered sufficiently stringent to prevent imposition, and a case of unjustifiable "sequestration" having recently occurred, under circumstances of the most arbitrary and barbarous character, in which a young lady, who was eventually proved to be merely of weak mind, was shut up in a madhouse, it is proposed to revise the law by which any person, on the simple certificate of a medical man, may be confined in a private asylum or "maison de santé," even after only a single visit to the patient, as has been the case just referred to. Admission into a public asylum is attended with greater difficulty, as the presumed lunatic has to pass through the Prefecture of Police, where he or she is examined by the physician attached to it, and the patient is disposed of according to the circumstances of the case. According to the new "projet de loi," the medical man's certificate shall be supplemented by a full statement of the case, detailing the symptoms, the different phases of the malady, and the motives for which it may be deemed necessary to remove the patient to an asylum. Even then the sequestration will be only provisional and will become definitive after certain formalities which, for want of space, cannot be reproduced here, but which are so complicated that it would be rather difficult to shut up any person who is not really insane. The rules respecting the arrangements of the inmates of the infirmary attached to the Prefecture of Police are also to be greatly modified, but not a day too soon, as hitherto these unfortunate creatures have been treated more like criminals than patients. Dr. Legrand du Saulle, who was one of the physicians to the infirmary, has been promoted to principal physician, in the room of Professor Lasègue, deceased.

PHYSICIANS' PRESCRIPTIONS.

A rather curious *procès* lately took place before the justice of the peace at St. Germain, in which a pharmacien was prosecuted for having refused to give up a prescription that was taken to him by a patient. The patient claimed the prescription as being his property, which the chemist contested, but the tribunal decided otherwise, and the prescription was restored to the patient. The Société de Médecine Légale, commenting on the case, was of opinion that, although the decision of the judge was unassailable from a legal point of view, yet it was considered that the restitution of the prescription was attended with great inconvenience, as the patient may take it to other chemists successively, and have it made up oftener than may be necessary or good for him, without any reference to the medical man who gave him the prescription. Thus it has lately happened that a female patient spent 1800 francs, or £72, for the purchase of morphia for hypodermic injections, which had been only a few times prescribed for her, but which she ultimately employed on her own account. The result was that she became insane, which the medical experts who were required to give their opinion attributed to the abuse of morphia. Whereupon the husband sued the chemist, but a case of the kind not having before been brought to the notice of the court, the present prosecution has been remanded for legislation.

COTTAGE HOSPITALS.

At a banquet given by the Société Française d'Hygiène last week, Dr. Mallez, in response to a toast concerning the great service conferred by the Society, said that the services already rendered to the poor and labouring classes may be still further extended by the establishment of cottage hospitals at a fair distance from the large cities to which the greater number of the patients may be removed. In order to carry out this idea, he proposes that railway trains, which he would call "trains de santé," as there are pleasure trains, should be organised, by which all transportable patients, of whom there are at least nineteen-twentieths who crowd the hospitals at present, should be conveyed. In order to

develop the subject, Dr. Mallez offers a prize of 300 francs to the author of the best memoir, showing the great incongruities that exist between the present system of hospitalisation and the principles of hygiene, and the best means for remedying the evils.

DEATH OF KRISHABER.

Dr. Krishaber, the well-known laryngologist, died on Wednesday, the 11th instant, from typhoid fever, just within a few days of the death of his wife. Dr. Krishaber was a Hungarian by birth, and a pupil of the celebrated Czermak. He contributed in a great measure to the popularisation of the laryngoscope in this country. Among his principal works may be cited an excellent article on the larynx and the different forms of laryngitis, which was published in the Encyclopædic Dictionary of the Medical Sciences, and numerous other articles which were published in the "Annales des Maladies de l'Oreille et du Larynx," a quarterly publication he had founded in conjunction with the late M. Isambert and M. Ladreit de la Charrière.

About three or four years ago an annual pension of 12,000 francs was granted to M. Pasteur, the eminent biologist. It is now to be raised to 25,000 in recognition of the immense service he has rendered to science and industry. The pension, which is for life, is to descend to his widow and children.

April 17th, 1883.

Obituary.

THOMAS BLEASE, L.S.A.

MR. BLEASE, of Altrincham, who died on March 14th, in his eightieth year, commenced his professional life when about fifteen years of age, under the able training of Mr. Pearson, then in practice in Altrincham; and almost up to the day of his death he was working diligently and making every effort to keep himself abreast with the progress of medicine and surgery. So that he was actively engaged in the medical profession for sixty-four years. On March 6th he appeared a little unwell, and pneumonia soon made itself evident. He was well favoured by nature, and having a very strong constitution, with great power of endurance of both mental and physical exertion, and a most pleasing manner, he early acquired a very extensive practice, which he conducted up to the time of his decease. He believed in the power of drugs, and was always hopeful for the result, which his patients very frequently observed, and had their confidence in him enlisted at once; and his cheerful disposition and most benign countenance often comforted the sick and dying when medicine failed, so much so that they frequently remarked that he must visit them, "for his presence did them good." He lived and died a Christian, leaving a son and four daughters to lament his loss and admire and imitate a life that had passed away full of years and honour. He was interred at St. George's Church, Altrincham, when every respect and sympathy were exhibited; and it was easy to see that very many of those present knew that a good man was gone.

MEDICAL NOTES IN PARLIAMENT.

The Medical Act Amendment Bill.

ON Thursday the House of Lords went into Committee on the Medical Act Amendment Bill, Lord Redesdale in the chair.

Lord Powerscourt moved an amendment to Clause 3, in order to provide that no person should be registered who has not obtained the diploma of one of the medical authorities.

Lord Carlingford said this amendment was put on the paper before the amendments had been placed on the paper by himself. He was far from wishing to do any injury to the great medical bodies; and in its new shape the Bill would recognise all the titles and rights of all existing bodies, and would not attempt to create any fresh title. The Bill now avoided the difficulty in respect to women candidates. He could not accept the amendment.

The Earl of Milltown said both the Colleges of Surgeons and of Physicians in Ireland were particularly anxious as to the point covered by this amendment.

The Earl of Camperdown said the question of the affiliation of students to the Colleges was fully considered by the Royal Commission, who decided that compulsory affiliation was impossible.

In answer to the Duke of Richmond, Lord Carlingford said the principal changes he had made in the Bill were the omission of Clause 26, and the substitution of another clause for Clause 27.

The amendment was negatived, and the clauses up to Clause 8 were agreed to.

Upon Clause 9 Lord Carlingford said the question of the constitution of the conjoint boards was one of great difficulty in respect to the comparative representation of the universities on the one hand, and the medical corporations on the other. He had come to the conclusion that the numbers named in the Bill could not stand, as they did not fairly represent the relative value of the bodies in respect to medical examinations. At present the universities had a preponderance, which he thought undesirable. He therefore intended to propose that each of the five English universities should return one member, which would give the medical bodies a slight majority on the Board. In Ireland the turn of the majority should be given to the universities. He would accept the amendment on the paper to take away the proposed representation of the Apothecaries' Hall in Dublin. With one exception, each of the Irish medical authorities would return two members to the Conjoint Board. The three authorities which would return two members each would be the Royal College of Physicians, the Royal College of Surgeons, and the Royal University, and he should propose that Trinity College return three members. The result would be that the Irish universities would return five members to the Board, and the two medical corporations would return four.

The Marquis of Salisbury complained that after the medical authorities had considered and accepted the proposals in the Bill in respect to the representation on the new board, the Lord President should now have come down and, without notice, proposed an entirely different scheme. In lowering the representation of the universities, which were a guarantee for a higher class of education for the medical profession, the noble lord had not increased the value or dignity of the new Medical Council. Moreover, he had spoken of five English universities, to each of which he had given two members, thereby placing Oxford on the same footing as Victoria, and if he went as far as Victoria why should he not include the Welsh University?

Lord Carlingford said he had made the change upon information which had reached him since the Bill was printed.

Earl Granville said there was the greatest difficulty in arriving at any theory of representation which could be altogether justified. In regard to the relative importance in respect to medical degrees, Oxford was vastly inferior to the London University.

The Earl of Galloway said he had presented petitions from Glasgow on this point. The Bill proposed to give eight representatives to the Scotch universities, and three to the medical corporations on the Board, in place of the old arrangement which gave two to the universities and three to the medical corporations. This was giving an undue preponderance to the universities, and he would move an amendment on the report.

Earl Cairns said he had understood that the two classes of learned bodies were to have equal representations on the Board. If Oxford and Cambridge were to have two representatives each the London University might be satisfied with one. There were obvious reasons why there should be differences made between these bodies.

The Earl of Milltown remarked that there were differences between the universities and medical colleges, inasmuch as the latter were teaching bodies rather than examining bodies.

The Earl of Camperdown said he could not concur in some of the original proposals in this Bill. The Royal Commission had left this matter to be dealt with by Parliament. Of course, the three kingdoms must be dealt with on the same principles, and those should be based on a consideration of what the several bodies had done in the past and were likely to do in the future in respect to medical education. He would suggest that, as the discussion had now become very general, they should postpone

the consideration of the English Board, and consider the Scotch and Irish Boards successively.

The Duke of Richmond supported the proposal in the Bill so far as the English Board was concerned, and reminded the Committee that of late years the Universities of Oxford and Cambridge had made great strides in the matter of medical education.

Lord O'Hagan said some 900 medical students were connected with the Royal University in Ireland, and it would be unfortunate to establish the proposed distinction between the University and Trinity College.

The Earl of Belmore said the University of Dublin was not desirous of any distinction being made between it and the other university.

Lord Carlingford said he was desirous not to take anyone by surprise, and he would therefore postpone the question of the English Board. In respect to Ireland, he would accept the proposals of Earl Cairns, strike out the Dublin Apothecaries' Hall, give three representatives to each of the universities, and also to the College of Physicians, and two to the College of Surgeons.

The necessary amendments were made in Clause 9 to carry out the arrangement thus indicated.

Lord Carlingford moved a set of amendments to the effect that the Medical Council or the Privy Council should not have the power of striking off the list any of the bodies contributing to the Medical Boards without "reporting to Her Majesty."

These amendments were agreed to without discussion, and the clause as amended was added to the Bill.

On Clause 10, Lord Balfour of Burleigh moved an amendment which would enable the final examinations in medicine, surgery, and midwifery to be held at each university by the examiners of the Medical Board in conjunction with the examiners of the university. He said his object was to avoid the necessity of a second examination, which, especially in the case of the Edinburgh University, was a long and expensive affair.

Lord Carlingford resisted the amendment, which he considered fatal to the principle of the Bill.

The amendment was withdrawn, and the clause was added to the Bill.

Clause 11 was omitted, and several succeeding clauses were passed without amendment.

On Clause 21, which gave each medical board authority to visit medical schools, and deprive them of the privilege of being recognised as medical schools, and similarly deprive examining authorities of their privileges, an amendment by the Earl of Milltown was agreed to giving the right of appeal to the medical school.

On Clause 28, which relates to the penalties for misuse of medical titles, Lord Carlingford moved an amendment providing that anyone who practised for gain or professed to practise, or published his name as practising medicine or surgery, or received any payment for practising medicine or surgery, should be liable to a penalty of £20.

Lord Mount Temple opposed the amendment, as being too stringent.

Lord Carlingford said the amendment was really in the nature of a relaxation.

The amendment was then agreed to.

All the remaining clauses were agreed to without material amendment, except Clauses 47 and 75, which were omitted.

The Bill passed through Committee, and was reported to the House.

The Infectious Diseases Notification Bill.

In the House of Commons on Friday, April 13th, petitions against this Bill were presented from Liverpool and Mile-end Old Town, and on Monday a further petition from Alexander Knight, M.D., and others. On Tuesday a petition in favour of the Bill was presented from Clerkenwell. The second reading of the Bill, against which there are notices of opposition in the names of Messrs. Hopwood, Thomasson, and Mayne, has been further deferred.

Petitions were presented from St. Andrews and Aberdeen for alteration of the Scotch Universities Bill; from P. Hood, M.P., and others, in favour of the Medical Acts; from A. M. Kiernan and others in favour of the Registration of Midwives; from Acton and Heston for alteration of the Public Health Act, 1875; and from Aberdeen for abolition of the Lunacy Board.

A return was presented on Tuesday showing the admissions to hospital during 1881 of soldiers suffering from venereal diseases. Mr. Stansfeld's motion for abolition of the Contagious Diseases Acts stands for Friday evening.

Artisans' Dwellings.

Mr. Broadhurst has put upon the paper the terms of his motion, for which no day has yet been secured, as follows:—"That in the opinion of this House, the continued and increasing displacement of workpeople by the destruction of their dwellings in the centre and crowded parts of the great towns, and especially of the metropolis, renders it advisable to confer and impose powers upon municipalities to acquire sites available for the erection of dwellings for such number of people as may be displaced, and that for this purpose the powers of compulsory purchase of land now possessed by school boards and railway companies should be conferred in like manner upon municipalities."

On Tuesday, in reply to Sir R. Cross, Sir W. Harcourt said three schemes had been successively submitted to the Home Office by the Commissioners of Sewers for building on the ground cleared under the Act of 1875. Two of the schemes were rejected, but the third it was found possible to adopt; and there would be no further delay in the matter.

The Vaccination Acts.

Mr. Hopwood's motion stands first on the paper for Tuesday, May 1st, and is in the following terms:—"To call attention to the compulsory clauses of the Vaccination Acts; and to move that, in the opinion of this House, it is inexpedient and unjust to enforce vaccination, under penalties, upon those who regard it as unadvisable and dangerous." Upon this Dr. Cameron has given notice of the following amendment:—"That while compulsory vaccination could not be abolished without great public danger, our vaccination laws might with advantage be amended in points of detail."

Lunacy Post-mortems.

Mr. Trevelyan stated to Mr. Blake that the Lord Lieutenant of Ireland had written to the governors of the Limerick Lunatic Asylum, expressing his disapproval of the holding of a post-mortem examination on an inmate of the asylum by the resident medical superintendent. His Lordship considered it necessary that post-mortems in such cases should be conducted by an independent medical authority.

Water Analyses.

Sir C. Dilke informed Mr. Firth that the monthly publication of reports on the London water, which purported to be addressed to the President of the Local Government Board, were not authorised by him, and were misleading. After this expression of opinion, he expected that they would be discontinued.

On Wednesday, a petition in favour of the Infectious Diseases Notification Bill was presented from the Social Science Association. The second reading of the Bill was further deferred to May 29th, and Mr. Mayne gave notice that he will move that it is inexpedient that Ireland should be excluded from the scope of the Bill.

On Thursday, Mr. Cross promised Mr. P. A. Taylor to make inquiry with regard to an alleged decision of the High Court of Madras to the effect that compulsory vaccination is illegal.

THE BILL IN COMMITTEE.

ON Thursday evening the House of Lords was engaged for three hours in Committee on the Medical Bill. Many members of the House, including the Lord Chancellor, took part in it. Finally, the Bill passed through Committee in a pretty entire form. Reserving more detailed criticism till next week, we may say that the discussion had reference chiefly to the composition of the Divisional Medical Boards. That of the Scotch Boards was retained without any serious attempt to alter it. The English Board was altered so as to give the corporations a slight predominance. This change was in vain resisted by Lord Salisbury and others. It commends itself as reasonable, considering the little interest that the older universities have hitherto taken in medical education. The Irish Medical Board is to be so constituted as to give the Irish universities a majority of one over the corporations. Lord Cairns, Lord

Emly, and Lord O'Hagan were happily agreed that the University of Dublin and the Royal University should have an equal number of votes, and it was so arranged. So far only one body has disappeared. The Irish Apothecaries are to be left out of the Divisional Board for Ireland. The principle of direct representation was unanimously accepted by the House of Lords with one exception—that of Lord Salisbury, who thought fit to make an attack as ungracious as it was weak on this principle. The new Medical Council was accepted without change by the House. The only mutilation of the Bill—and we must say we regret it—is in Part IV., having reference to qualifying titles and the registration of titles. The Lord President has abandoned the column for higher titles, and agreed to the registration of all existing titles. Affiliation with existing bodies will not be essential, but the Lord President expressed his belief that it will be largely adopted. Our readers would do well to judge of the detailed changes made in Committee only from the Bill as it will be reprinted. Noble Lords were very imperfectly heard.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At a meeting of the Council on the 12th inst. the following Members were elected to the Fellowship, under the Charter of the 15th Victoria relating to Members of the College of twenty years' standing:—

Huxley, Thomas Henry, LL.D., F.R.S., Marlborough-place, St. John's Wood; M.R.C.S., May, 1862.
Tomes, John, F.R.S., Cavendish-square; M.R.C.S., March, 1859.

The following gentlemen, having passed the required examination for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on Monday last:—

Barley, David Henry, M.B. Durh., Sheffield.
Betts, John Howard, M.D., Kingston, Canada.
Bryant, Sidney William, M.B. Edin., Milner-square.
Evans, Owen Henry, L.K.Q.C.P. Irel., Bodederin, Anglesea.
Hartley, Isaac, M.B. Durh., Beckermont, Cumberland.
Johnson, Geo. Arthur, L.R.C.P. Lond., Watlington, Oxon.
Maxwell, Patrick Wm., M.B. Edin., Irvine, Ayrshire.
Money, Percy Fredk., L.R.C.P. Edin., Lambeth-road.
Munckton, Alfred, L.S.A., Wimpole-street.
Rowland, John Jones, L.S.A., Argyle-square.
Smith, Pynsent C., L.R.C.P. Edin., Woburn, Beds.
Vinrace, Edward Dennis, L.S.A., Birmingham.

The following gentlemen were admitted Members of the College on Tuesday last:—

Floyer, Frederick Anthony, L.S.A., Putney.
Heald, Hugh, Liverpool.
Herbert, J. W. Chambers, Swinton, near Manchester.
Johnston, George David, The Grove, Camberwell.
Littlewood, Harry, Hempstead, Norfolk.
Marten, Robert Humphrey, Wolverhampton.
Meyer, C. H. Louw, Cape Colony, South Africa.
Pinching, Horace Henderson, Gravesend.
Praen, Septimus Tristram, Clapham-road.
Thompson, Charles Herbert, Lambeth.
Williams, David Lewis, Ferryside, South Wales.
Williams, J. H. Hywell, L.S.A., Haverfordwest.

The following gentlemen were admitted Members of the College on Wednesday last:—

Bentley, John Whitehead, L.R.C.P. Edin., Denton, near Manchester.
Bloxam, Geo. Edward, L.R.C.P. Lond., Wimbledon Hill.
Bostock, John Yates, Onslow Gardens.
Braine, G. M. Panton, L.R.C.P. Lond, Belsize Park.
Crago, Wm. Henry, L.R.C.P. Lond., Sydney, N.S.W.
Cresswell, Francis, L.R.C.P. Lond., Winchmore Hill.
Groom, Harry, L.S.A., Wisbech.
Humphreys, Chas. Style, L.S.A., Chichester-street.
Jordan, Thos. Luckman, Greenheys, Manchester.
Rudd, Walter Edgar, Lee, Kent.
Stone, F. W. Stanley, L.R.C.P. Lond., Brighton.
Vogan, James Norman, L.R.C.P. Lond., Caterham.
Whitcombe, Philip Percival, L.S.A., Westbourne Green.
Winter, Thomas Bassell, L.S.A., Werter-road, Putney.

The following gentlemen passed the Primary Examination in Anatomy and Physiology at a meeting of the Board of Examiners on the 12th inst.:—

Arthur E. Smithson, Bryan Furnival, Edmund F. Trevelyan, and William H. Booth, St. Bartholomew's Hospital; John Lynes and Arthur S. Loftus, Charing-cross Hospital; Alfred Cropley, Harvey K. Bradbury, and Jem Blachford, London Hospital; George E. Halstead and Edward W. Du Buisson, Guy's Hospital; Percy R. T. Harris and Arthur C. De Renzi, King's College; Thos. H. Williams and Bernard S. Lawson, Middlesex Hospital; John S. Hutton, Albert E. Godfrey, and Sydney Warren, St. Thomas's Hospital; Morgan Hughes, Westminster Hospital; William Rawes, Newcastle-on-Tyne and London Hospital; Charles A. Goullet, University College.

Of the 224 candidates examined during the past fortnight, 33 failed to satisfy the Board, and were referred for three, and 1 candidate for six, months' further anatomical and physiological study.

[In last week's list of candidates who passed the Primary Examination, the name "C. K. M. Green" should have been "C. R. Mortimer Green." The name R. F. Waites (Sheffield) was also inadvertently omitted from the same list].

The Library of the College is closed to-day (Friday) for the purposes of the examination in Anatomy and Physiology.

UNIVERSITY OF EDINBURGH.—The following gentlemen have passed the recent First Professional Examination:—

A. R. Aldridge, J. A. Armitage, W. S. Armitage, J. W. Astles, O. R. Bain, G. A. Ballingall, W. H. Bansall, H. L. Barker, A. A. Bartholomew, Victor Black, G. M. Brown, James Brown, J. H. Bruce, W. J. Cameron, J. M. Campbell, J. J. Carson, R. L. Cauntor, W. W. Chamberlain, P. P. Chetti, W. S. Counsell, William Craig, A. J. Cross, F. E. Crossley, J. E. Davies, H. G. Dickman, Arthur Drury, Thomas Edwards, William Elder, L. G. Fischer, Alexander Fisher, T. H. Fiske, H. S. R. Freeborn, G. V. Gilray, T. P. Gray (with distinction), J. A. Guthrie, F. J. Hart, J. T. Harvey, T. H. Hayton, F. W. Hennessy, J. R. Hill, Robert Howden, Samuel Hughes, C. W. Hunter, W. H. M. Ingham, G. L. Jenkins, E. J. Jennings, F. M. Johnson, J. J. Johnson, S. G. Kinloch, J. A. Kynoch, R. F. G. Leith, H. H. Littlejohn, Thomas MacDonald, Thomas MacGregor, C. R. M'Guffie, T. M. Macknight, C. J. R. M'Lean, G. H. Mason, C. H. Melville, W. F. Menzies, S. H. Merryweather, A. van der Merwe, R. H. Mitchell, W. G. Mitchell, Wm. Murphy, Glenmore Ozanne, F. G. Phillippo, E. E. Pringle, G. F. Rhodes, J. K. Robinson, Robert Robinson, J. G. da Rocha, Tennent Ronalds, J. R. H. Ross, D. H. Scott, K. M. Scott, F. R. Shepherd, A. W. Shields, R. B. Simmins, J. L. M. Smith, C. E. Southwell, W. C. Spiller, A. J. M. Stenhouse, K. T. Stewart, R. C. Strode, James Strother, G. A. Sutherland, W. H. Sutherland, J. W. Talent, Inglis Taylor, Wm. Evans Thomas, A. E. Thomson, J. K. Tomory, W. A. Turton, W. J. Visser, Henry Ware, Duncan Watters, J. A. Wetherell, J. H. Whiteside, J. C. Williams, James Wilson, W. C. Wilson, Andrew Young.

APOTHECARIES' HALL.—The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on April 12th:—

Merrifield, Sydney Sargent, Gascoyne-place, Plymouth.
Short, Thomas Sydney, Edgbaston, Birmingham.

The following gentlemen also on the same day passed the Primary Professional Examination:—

William James Best and Stephen Francis Smith, London Hospital; Walter Carrington Hearnden, Guy's Hospital.

A PROPOSITION has been made to found a Sanitary Inspectors' Association.

THE Prince of Wales has consented to preside at the anniversary of the Royal Hospital for Diseases of the Chest, to be held on June 1st.

NORTH-WEST LONDON HOSPITAL.—Her Royal Highness the Princess Christian has consented to open the new wing of this hospital some time in June.

VACCINATION GRANT.—Mr. Roberts, Coningsby, Lincolnshire, has received the Government grant for efficient vaccination.

THE MANCHESTER SOUTHERN HOSPITAL.—The committee of this hospital have issued a circular asking for funds to enable them to carry out much needed extensions and alterations.

MRS. W. OVEREND, of Sheffield, has just made a donation of £10,000 to the Infirmary of that town. The interest of the gift is to be devoted to sending convalescent patients to homes at the seaside or elsewhere.

DEVONSHIRE HOSPITAL AND BUXTON BATH CHARITY. From the quarterly statement presented to the committee of management on the 7th inst. it appears that the receipts of the charity during the past three months have been greater by £78 than the receipts during the corresponding period of last year; the receipts during this quarter of 1882 having been unusually in advance of the receipts during the first quarter of 1881. Out of the 269 patients admitted into the hospital, 155 were discharged as improved and 98 remained on the books at the end of the quarter. According to a classification of the diseases treated which is issued with the report, out of the 269 cases admitted 203 were cases of rheumatism, 3 were due to the poisonous effect of lead, and 10 consisted of various forms of paralysis

GLASGOW UNIVERSITY MEDICO-CHIRURGICAL SOCIETY.—The following gentlemen have been appointed office-bearers for the ensuing year:—Honorary President: Professor Charteris, M.D. Honorary President Elect: Dr. J. Coats. President: W. A. Forsyth. Senior Vice-President: C. O. Hawthorne. Junior Vice-President: H. Rutherford, M.A. Corresponding Secretary: W. Rankine. Minute Secretary: J. Macphail. Treasurer: J. Hinshelwood, M.A.

AT the monthly meeting of the Montrose Police Commission, held on the 9th inst., it was resolved that a yearly salary of £6 be given to the medical officer of the prison, Dr. Lawrence. The medical officer had performed his duties up to this time without any remuneration. Formerly when prisoners were allowed to be kept in Montrose prison for a longer period than now the medical officer received £12 per annum.

PRESENTATIONS.—Thos. M. Philson, M.D., M.R.C.S., Coroner for the Provincial District of Auckland, N.Z., and late surgeon of the district, has been presented by his fellow-citizens with an address, a gold chronometer, and a purse of sovereigns. The testimonial, which altogether represented the value of £426, was presented by the Mayor of Auckland, and was given on the occasion of the resignation by Dr. Philson of the post of surgeon to the city hospital, after an incumbency of twenty-four years. Dr. Philson, in returning thanks for the token of esteem conferred on him, expressed his intention of devoting the money to the formation of a nucleus of a library for the use of the medical school which, he hoped, would soon be established in connexion with the Auckland Hospital.—Mr. J. Ismay Atkinson, M.R.C.S. and L.S.A., of Wylam, has been presented by his friends with a testimonial, consisting of a miniature brougham, a silver inkstand, and an illuminated address, as a token of their appreciation of his services during the forty-four years he has practised in Tyneside.

SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly court of the directors of this Society was held on April 11th, in Berners-street, Dr. Pitman, Vice-President, in the chair. Applications were read from fifty-eight widows, five orphans, and three orphans on the Copeland Fund, and the sum of £1227 was recommended to be distributed among them in July next. The expenses of the quarter were £40. The death of a widow was announced, whose first grant had been made in 1857, and who had received a total of £1056 10s. from the Society. Another widow no longer required assistance. Three new members were elected. It was resolved that the following gentlemen should be recommended for election at the annual general meeting as officers, to supply the vacancies occurring—viz., Dr. George Johnson to be vice-president, in the place of Sir Thomas Watson, deceased; Mr. Cooper Forster, Mr. Garman, Dr. Garrod, Dr. Grigg, Mr. Freeman, and Mr. Warrington Haward to be directors, in place of the six senior directors, who retire. It was also resolved that Mr. T. R. Upton, honorary solicitor, and Mr. John Croft, F.R.C.S., a benefactor, be recommended for election as honorary members. Legacies to the amount of £280 were reported as having been received since the commencement of the year; £200, less duty, from Mr. Henry Sterry, vice-president, and £100 from Mrs. Allnutt, part of a sum left by her late husband for charitable purposes. The annual general meeting was fixed to be held at 5 P.M. on May 16th.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

BAINES, EGERTON C. AUGUSTUS, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer for the Henley District of the Henley Union, vice Jeston, resigned.

BURRELL, Mr. B. A., has been appointed Public Analyst for the City of Cork.

COLMER, PTOLEMY, S. H., M.D., L.R.C.P.Ed., L.F.P.S.Glas., L.S.A.L., has been appointed Medical Officer for the Second District of the Yeovil Union, vice Marsh, resigned.

DEELEY, WILLIAM, M.D., M.Ch. New York, L.K.Q.C.P.I., has been appointed Medical Officer for the Leavening District of the Malton Union.

DOW, H. BOOTHBY, M.D., M.R.C.S., L.S.A.Lond., has been appointed Assistant-Physician to the St. John's Hospital for Diseases of the Skin, Leicester-square.

FARMER, SEPTIMUS, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer for the Western District of the Redruth Union.

FINLAY, Rev. HUNTER, M.D., L.F.P.S.Glas., &c., has been appointed Surgeon to the Hospital at Ravenswood, Townsville, Queensland.

FIRMAN, CHAS. GEORGE, L.F.P.S.Glas., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Hatfield District of the Dunmow Union.

HORDER, T. GARRETT, M.R.C.S., L.R.C.P.Ed., has been appointed Medical Officer to the Press Benefit and Superannuation Society for South Wales and Monmouthshire.

JACKSON, ROBT. ALEX., L.R.C.P.Lond., M.R.C.S., L.S.A.Lond., has been appointed Surgeon in the X Division of Metropolitan Police.

JONES, JOHN EDMUND, M.B., C.M.Glas., has been appointed Medical Officer for the Aberdaron District of the Pwllheli Union.

KNIGHT, F., M.R.C.S., has been appointed House-Physician to the General Lying-in Hospital, York-road, Lambeth.

LAST, Mr. FRANK B., has been reappointed Public Analyst for the Borough of Barrow-in-Furness.

MARKS, C. FERDINAND, M.D.Q.U.I., M.R.C.S., has been appointed Visiting Surgeon to the Brisbane Hospital, Queensland, vice O'Doherty, resigned.

MARSH, JAMES J., L.R.C.P. &c., has been appointed Honorary Surgeon to the Ardwick and Ancoats Dispensary and Ancoats Hospital, Manchester, vice Hudson, resigned.

OCHILTREE, E. GRAHAM, M.B., C.M.Glas., M.R.C.S., has been appointed Honorary Physician to the Ballarat Hospital, Victoria.

O'KELLY, THOMAS, M.D.Q.U.I., has been appointed Medical Officer for the Second District of the Chipping Norton Union.

PAXTON, JOHN, jun., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the East Norhamshire District of the Berwick-upon-Tweed Union.

PINNOCK, ROBERT DENHAM, M.B., C.M.Glas., has been appointed Honorary Surgeon to the Ballarat Hospital, Victoria.

SMITH, WILLIAM BEATTIE, F.R.C.S., L.R.C.P.Ed., has been appointed Deputy Medical Superintendent of the Ararat Lunatic Asylum, Victoria.

STENHOUSE, Mr. THOS., has been appointed Public Analyst for the Borough of Rochdale, vice Collinge, deceased.

TAYLER, WILLIAM GEORGE, M.R.C.S., L.S.A.Lond., has been appointed Government Medical Officer and Vaccinator for the District of Glen Innes, New South Wales.

Births, Marriages, and Deaths.

BIRTHS.

BENNETT.—On the 10th inst., at Sunnyside, Multan, India, the wife of Surgeon-Major John Bennett, M.D., H.M. Bengal Army, of a daughter.

GRIFFITHS.—On the 26th ult., at Prince Alfred-terrace, Ireland Island, Bermuda, the wife of Staff Surgeon R. S. P. Griffiths, Royal Navy, of a son.

MURRAY.—On the 10th inst., at Meadow Side, Putney, the wife of G. Stanley Murray, M.D., of a daughter.

TWINING.—On the 17th inst., at The Knoll, Salcombe, S. Devon, the wife of A. H. Twining, M.R.C.S., of a daughter.

WILLEY.—On the 9th inst., at Kimbyrst, Bromley, the wife of Henry Willey, M.D., of a daughter.

MARRIAGES.

CARR—COWELL.—On the 13th inst., at Christ Church, Brixton, by the Rev. W. L. Rolleston, M.A., Vicar of Scraptoft, Leicester, Thomas Carr, M.R.C.S.Eng., eldest son of Thomas Carr, of Melbourne Lodge, Brixton, to Mary Anne, youngest daughter of the late E. Hudson Cowell, of Camberwell.

CHRISTISON—BROWN.—On the 11th inst., at St. Luke's Church, Liverpool, David Christison, M.D.Edin., second son of the late Sir Robert Christison, Bart., of Edinburgh, to Susanna Hodgson, second daughter of the late Andrew Cassels Brown, of Formby, Lancashire.

HARRIS—KING.—On the 12th inst., at St. Michael's Church, Teignmouth, S. Devon, Frederick W. H. Davis Harris, M.R.C.S., L.S.A., to Jessie Maria, third daughter of the late Major King, 2nd Dragoons (the Scots Greys).

THURLAND—WROTH.—On the 12th inst., at St. Lawrence, Bigbury, Devon, by the Rev. F. Farrer, Rector of the Parish, assisted by the Rev. F. E. Thurland, Rector of Thurstaston, Cheshire, father of the bridegroom, F. E. Thurland, M.R.C.S., of 1, Wilmington-square, London, to Mary Elizabeth (Minnie), second daughter of John Wroth, Esq., of Combe, Bigbury.

WILSON—HOARE.—On the 5th inst., at St. Remigius Church, Joseph Henry Wilson, M.R.C.S., of Kenninghall, Norfolk, to Constance Mary, fourth daughter of William P. Hoare, F.R.C.S.E., of Water-Newton, Hunts.

DEATHS.

BATT.—On the 16th inst., at Bournemouth, Augustine Batt, M.D., of Witney, Oxfordshire, aged 54.

BRENDON.—On the 12th inst., at 75, Inverness-terrace, Hyde-park, Peter Brendon, F.R.C.S., formerly of Highgate, aged 85.

CAREY.—On the 31st ult., at Hauteville, Guernsey, Robert Gledstanes Carey, M.D., in his 71st year.

DUFF.—On the 15th inst., at Gray's-inn-road, W.C., after a short illness, William Henry Duff, M.R.C.S., L.S.A., aged 67.

FARR.—On the 14th inst., at Portsdown-road, Maida-vale, W., William Farr, M.D., C.B., D.C.L., late of the General Register Office, Somerset House, aged 75.

MURRAY.—On Jan. 16th at Glen Innes, New South Wales, John Richard Murray, L.R.C.P.Ed., L.F.P.S.Glas.

STEELE.—On the 7th inst., at Montrose, Henry Steele, M.D., in his 44th year.

TOUCH.—On the 22nd ult., at Inverary, Argyllshire, Dr. Edward Touch, Staff Surgeon on the Half-pay List, formerly of the 83rd, 92nd, and 40th Regts.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, London.

Transfusion, its History, Indications, and Mode of Application. By C. E. Jennings, L.R.C.P.I. pp. 69.

Practical Lessons in Elementary Physiology and Physiological Anatomy, for Schools and Science Classes. By D. M'Alpine, F.C.S. pp. 23. With 12 Plates.

BOGUE, DAVID, London.

Transactions of the Epidemiological Society of London. New Series, Vol. I. 1881-82. pp. 174. With Charts.

CHURCHILL, J. & A., London.

The Student's Guide to Dental Anatomy and Surgery. By Henry Sewill, M.R.C.S., L.D.S. Second Edition. pp. 226. With Illustrations.

Clinical Lectures on Diseases of the Urinary Organs. Delivered at University College Hospital by Sir Henry Thompson, F.R.C.S. Seventh Edition. pp. 100. Illustrated. 2s. 6d.

The Student's Guide to Surgical Diagnosis. By Christopher Heath, F.R.C.S. Second Edition. pp. 240.

Mechanical Exercise a Means of Cure; being a Description of the Zander Institute, London. Edited by the Medical Officer of the Institute. pp. 92. Illustrated.

LONGMANS, GREEN, & CO., London.

Transactions of the Obstetrical Society of London. Vol. XXIV. pp. 339. With Plates.

Transactions of the National Association for the Promotion of Social Science. Nottingham Meeting, 1882. pp. 660.

Short Studies on Great Subjects. By J. A. Froude, M.A. New Edition. Vol. IV. pp. 572.

Food and Home Cookery. By Catherine M. Buckton. New Edition. pp. 192. With Illustrations.

MACMILLAN & CO., London.

On the Pathology of Bronchitis, Catarrhal Pneumonia, Tubercle, and Allied Lesions of the Human Lung. By D. J. Hamilton, M.B., F.R.C.S.E., F.R.S.E. pp. 248. With Illustrations.

Text-book of Geology. By Archibald Geikie, LL.D., F.R.S. pp. 971. With Illustrations.

Lectures on Cataract, its Causes, Varieties, and Treatment. By George Cowell, F.R.C.S. pp. 126. With Illustrations.

PITMAN, F., London.

The Ethics of Diet: a Catena of Authorities Deprecatory of the Practice of Flesh-eating. By Howard Williams, M.A. pp. 336.

SMITH, ELDER, & CO., London.

The Student's Manual of Venereal Diseases. By Berkeley Hill and Arthur Cooper. Third Edition. pp. 100.

TRÜBNER & CO.

The Message of Psychic Science to Mothers and Nurses. By Mary Boole. pp. 206.

Die Anämie; von S. Laache. (Die Mallingsche Buchdruckerei, Christiania.)—Der Cronische Nasen- und Rachen-Katarrh; von Dr. M. Bresgen. (Urban und Schwarzenberg, Wien.)—Sur quelques Causes de Maladies de l'Oreille; par Dr. A. Ducan.—The Degrees, Gowns, and Hoods of the British, Colonial, Indian, and American Universities and Colleges; by the Rev. T. W. Wood. (Pratt, London.)—Passover Wine; by Dr. Norman Kerr.—Dr. G. Beck's Therapeutischer Almanach.—Manuel des Injections Sous-cutanées; par Drs. Bourneville et Bricon.—Index Medicus, Vol. V., No. 2.—Longman's Magazine, April.—Leisure Hour, Sunday at Home, Boy's Own Paper, April.—Good Words, Sunday Magazine, April.—Contributions to Physiology, Part V.; by Isaac Ott, M.D.—Annual Report of the Public Gardens and Plantations of Jamaica for the Year ending Sept. 30th, 1882; by D. Morris, M.A., F.G.S.—Englisches Conversations-Buch f. Pharmaceuten; von Dr. Th. D. Barry. (Springer, Berlin.)—The Rights of the Insane and their Enforcement; by Clark Bell.—Domestic Poisons; by Wm. Thomson, F.R.S.Ed.—Om Behandlung af Syfilis medelst Subkutana Kalomelinjektioner; af Dr. G. Smirnoff.—Lectures delivered to the Employés of the Baltimore and Ohio Railway Company; by Prof. H. N. Martin.—The Botanical Atlas, Part XII.; by D. M'Alpine, F.C.S.—The Percentage of College-bred Men in the Medical Profession; by C. M'Intyre, M.D., of Easton, Pa.—Report on the Mitchell Library, Glasgow.—Das Ozon und seine Mögliche Therapeutische Bedeutung; von Dr. E. Stabel.—Principles of Physiognomical Hairdressing; by Joseph Lichtenfeld.—Contribution à l'Etude et du Diagnostic des Formes Frustes de la Maladie de Basedow; par le Dr. Pierre Marie.—Ueber die Wirkungen der verdünnten Luft auf der Organismus: eine Experimentaluntersuchung von Dr. A. Fraenkel und Dr. J. Geppert.—The Testimony of a Dewdrop to its Creator; by H. Noel, M.A.

Medical Diary for the ensuing Week.

Monday, April 23

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

MEDICAL SOCIETY OF LONDON.—Dr. Robert Lee, "On the Relation of Spinal Deformity and Fragility of Bones to Insanity (postponed)."—Mr. Hugh Smith, "On a Case of Foreign Body in the Pterygoid."—Dr. Day, "On a Fatal Case of supposed Pyæmia in a Child, associated with extensive changes in both Kidneys and Bladder."

Tuesday, April 24

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ROYAL INSTITUTION.—3 P.M. Professor McKendrick, "On Physiological Discovery."

ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 P.M. Mr. W. M. Flinders Petrie, "On the Mechanical Methods of the Egyptians."—Mr. F. C. J. Spurrell, "On Some Palæolithic Knapping Tools and Modes of Using Them."

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Dr. Percy Kidd, "On Two Cases of Congenital Syphilis of the Larynx."—Dr. Samuel West: 1. "On a Case of Purulent Pericarditis treated by Paracentesis and by free Incisions, with recovery;" 2. "On the Statistics of Paracentesis."

Wednesday, April 25

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

HUNTERIAN SOCIETY.—8.0 P.M. Adjourned discussion (to be opened by Dr. Stephen Mackenzie) on a paper by Dr. Stowers, "On the Nature and Treatment of Infantile Eczema."—Dr. Bedford Fenwick, "On Medical Common Sense in the Treatment of Chest Complaints."

Thursday, April 26

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

ROYAL INSTITUTION.—3 P.M. Dr. Waldstein, "On the Art of Pheidias."

Friday, April 27

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Mr. C. W. Siemens, "On Solar Physics."

CLINICAL SOCIETY OF LONDON.—Dr. Tyson (Folkestone), "On a Case of Tubercular Leprosy (the patient will be exhibited)."—Mr. Barwell, "On Removal of Large Portions of the Upper Lip without Deformity of the Face."—Dr. Southey, "On Tachotée, or Erythema Gangrenosum."—Dr. Stephen Mackenzie, "On a Case of Subcutaneous Nodules occurring in a Patient the subject of Syphilis, and with very indefinite connexion with Rheumatism."—Dr. Duckworth, "On a Case of Rheumatismal, Cutaneous, Subcutaneous, and Periosteal Nodules." Mr. Clutton will exhibit a Case of Spondylitis Deformans.

Saturday, April 28

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Mr. A. Geikie, "On Geographical Evolution."

METEOROLOGICAL READINGS.

(Taken daily at 5.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, April 19th, 1883.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia. in Vacuo.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 5.30 A.M.
Apl. 13	29·91	S.W.	44	41	..	50	38	..	Overcast
,, 14	29·87	S.W.	46	43	93	56	40	..	Cloudy
,, 15	29·81	S.W.	55	48	88	61	39	..	Cloudy
,, 16	30·03	N.W.	47	42	98	59	40	..	Hazy
,, 17	30·07	W.	48	43	95	57	37	..	Fine
,, 18	29·58	S.W.	55	50	102	66	42	..	Cloudy
,, 19	29·39	N.W.	47	47	..	48	44	57	Raining

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

MEDICAL TESTIMONIALS IN A HAIRDRESSER'S SHOP.

DR. FYFE, of Gainsborough, forwards us a letter written by himself to the *Retford and Gainsborough Times*, including one from the hairdresser who exposed his testimonials to the public view. The hairdresser explains that the testimonials came accidentally as a wrapper to some razors to be set. Dr. Fyfe is entitled to the benefit of this explanation, but it does not very much alter our opinion that he has used testimonials in a way that is not contemplated by those who write them. He justifies the distribution of his testimonials among the patients of the late Dr. Duigan, whose practice he bought.

Mr. A. J. Turner.—The specimens are proglottides, or joints of tænia. They will be found figured in Cobbold's work on "Parasites," p. 58. The patient is suffering from tapeworm.

CATGUT LIGATURES.

To the Editor of THE LANCET.

SIR,—Dr. Downes' experiments, though interesting and important, are not, I venture to think, sufficient to shed much light on the question of hæmorrhage after ligature with catgut. Unfortunately for his purpose, the knot was in all cases absorbed, though he made three twists in each. Had the knot remained unabsorbed, he might have been able to give us more definite information.

With the additional factor of the knot remaining, Dr. Barwell's and Dr. French's cases seem to have run a course analogous to that of Dr. Downes' dog No. 3. In this hospital we have just had a case which behaved as the first two dogs experimented on might have done had the knot remained. The external iliac artery was tied for an aneurism of the common femoral. The catgut used was Macfarlane's No. 3 chromic. An ordinary reef-knot was tied. The whole wound united at once except in two places—one in the centre of the incision, the other at the internal angle where the drainage-tube had been. On the twelfth day I syringed the knot out of the central aperture, and, though somewhat softened, it was so little affected that I succeeded with a pair of needles in undoing the outer twist. From the surgical wound there was never any hæmorrhage. As regards antiseptics, on which Dr. French lays some stress, the spray was not used, but the skin and all instruments were carefully carbolised, and a dressing of carbolic oil applied.

All the facts recorded, then, would, in my poor opinion, seem to point to the conclusion that, (1) while there must be something in the gut to account for the knot being absorbed in one case and not in another, yet to add a third twist is to needlessly increase the risk; (2) the presence of the unsoftened knot is not sufficient, *per se*, to account for the hæmorrhage, as, if the artery be satisfactorily occluded, there cannot be any bleeding afterwards.—I am, Sir, your obedient servant,

PHILIP H. KIDD, M.B., House-Surgeon.

Yarmouth Hospital, April 14th, 1883.

PARIS MUNICIPAL SCHOOLS.

M. JOFFRIN, the working-man member of the Paris Municipal Council, has brought forward a proposition to the effect that all municipal school-rooms should be placed at the disposal of the public after class hours for the holding of political and other meetings. Doubtless it is difficult, especially for the poorer sections of the community, to find places of meeting, but this is scarcely sufficient reason for gravely compromising the health of the thousands of children who attend the municipal, or what in England we might call the Board, schools. The school-rooms are very defective in the matter of ventilation, and the atmosphere will have but little prospect of purification if crowded meetings are to follow upon the conclusion of the classes. But this is not the most serious objection. It must be remembered that France is a country where disinfection is not practised. There is no law, rule, or custom to prevent a person in a state of desquamation attending a public meeting. It is difficult enough to prevent mischief arising from the mingling of many children together; but if political meetings are to attract the parents, especially the poorer and less healthy sections of the population, into the same room, then school epidemics must become more frequent.

STIMULANTS IN HOSPITALS.

DR. S. T. KNAGGS, in his medical report of the Newcastle Hospital, N.S.W., remarks:—"I availed myself of a recent trip to Europe to inquire into this question in all its bearings, and the result has satisfied me that much advantage and economy can be derived by moderating the quantity of stimulants supplied to hospital patients. During the past year I have adopted this view in my practice at the hospital, consequently a very much smaller quantity of stimulants has been used, without any detriment to the patients' welfare."

THE INFLUENCE OF DIET ON SCURVY.

To the Editor of THE LANCET.

SIR,—I have seen a number of interesting letters lately in THE LANCET, concerning the influence that fresh meat has in preventing attacks of scurvy, and speculating as to the reason why it possesses that influence in the Arctic regions and in warm climates such as India, and not in England. Although this communication will be rather late in the field, still those interested in this matter may like to know the following facts.

During four years, from the end of 1865 till the beginning of 1870, I lived in a part of the Province of Buenos Ayres in the Argentine Republic, over 200 miles from the capital and 60 from the nearest village. At that time, in all the country parts, fresh meat formed the staple food of poor and rich in that particular part of the country; vegetables and fruit were unknown except for about one month in the autumn, when occasionally carts used to come out from the villages with fruit. Everybody lived almost exclusively on meat. Bread could not be had, and biscuit and "farina" (a coarse meal made in Brazil from the mandioca plant, and consisting chiefly of starch and ligneous fibres) were so scarce and dear as to be practically out of the reach of the poorer classes. Here, then, we have a population living entirely on meat, and drinking nothing but "mate de yerba," which is a bitter kind of tea, and contains the same active principle that tea does. I practised among these people for four years, and never saw a single case of scurvy or anything like it during that time.

Here the meat is not frozen, nor is it eaten all, nor nearly all, on the same day that it is killed. As a rule, animals are killed twice a week on the estancias. In the winter the meat keeps well for four or five days, and in the summer it is dried in the sun (jerked beef) and it keeps for days or weeks in that condition. Of course, there are establishments where they kill every day, but this is unusual. The general rule is as I have stated above. Here, then, the theory as to acid or alkaline reaction falls to the ground.

I think that these facts prove that fresh meat (whether it be twenty-four or forty-eight hours old) contains all the necessary ingredients of a healthy food. All that we require is that each individual should eat enough of it. Out here it is not uncommon for a man to eat four or five pounds of meat at a meal. The usual allowance for each "puestero" (shepherd) is two sheep a week, or a corresponding quantity of beef. These sheep are not, of course, southdowns, they are much smaller, something like the Welsh mountain sheep, and will average perhaps about thirty pounds each, besides fat and offal. This amount of meat does not, however, represent the same thing as the same amount of English meat would. I am not chemist enough to say what is the exact difference, but I believe that the meat here contains less fibrine and albumen, and more salts and water than English meat does. At all events, I know that when a shoulder of mutton is roasted the scapula protrudes three or four inches beyond the meat, and it all seems to shrink in the same proportion.

A shoulder of mutton would be about a meal for one man. I have often eaten one myself at a sitting, and I have known of an individual whose regular allowance was one capon (wether) per diem, but then he would have nothing else. I think that you will find that Englishmen who eat English meat in the same quantity, will also be perfectly free from scurvy whether the reaction of the meat be acid or alkaline.

I remain, Sir, yours truly,

Monte Video, Feb. 10th, 1883. T. W. N. GREENE, L.R.C.P.E.

A CASE FOR GENERAL SYMPATHY.

MR. HENRY C. BURDETT, 30, Gloucester-road, Regent's park, N.W., desires us to acknowledge the receipt of the following subscriptions towards the Hurford Fund, in response to his letter which appeared in THE LANCET of the 14th inst. It is proposed to invest the money raised, in the names of trustees, for the benefit of Mrs. Hurford and the children. Amount already acknowledged, including £20 from the Medical Benevolent Fund, £228 6s.

Mr. Frederick Orton	..	£5	0	0	Mr. W. A. Dingle ..	.. £1	1	0
Mr. J. Sheineld	.. ..	2	0	0	Mr. Frodk. H. Alderson ..	0	10	6
Mr. H. Rimmington Mead		1	1	0	Mr. Wm. Collier ..	.. 0	10	0
Mr. Wm. B. Owen..	..	1	1	0	Mr. J. Frederick ..	.. 0	10	0
K.	.. ..	1	1	0				

Allygask.—Assuming the facts to be as stated, and that C and D had no cause of quarrel with A, we entirely agree with our correspondent in his view of the case.

SANITATION AMONG CROFTERS.

To the Editor of THE LANCET.

SIR,—I have read with pleasure a communication on the above subject in your issue of March 31st, and perhaps you will give place to a few remarks bearing on the same subject by one who has also practised in the Highlands of Scotland for some years. Your correspondent, Dr. M'Ewen, of Gairloch, may well write as he does where he is; ha[d] been in Skye it would have cost him his situation to have spo[ken] of lord's property in the way he does. My experience quite b[ears] his remarks on the great need of compulsory sanitation in th[e] districts of Scotland, and of the highlands and islands of Scotla[nd] particular; but what is most required is an Act of Parliament[s] new Poor-law Act for Scotland containing special clauses of a protective nature, and, in the interests of the medical profession and the public health alike, to put medical officers of health and poor-law surgeons beyond the caprice of Scotch Parochial Boards. The present Health Act for Scotland, although doubtless permissive so far as the appointment of a medical officer of health is concerned, contains ample measures, and confers certain powers on a medical officer of health to recommend the removal of flagrant nuisances; still what avails these powers conferred if the surgeon holds his appointment at the mere pleasure of the Parochial Board, whose members may actually be the perpetrators of the nuisance, or the owners of the land or tenements on which the nuisance exists? What is the use of medical men complaining of nuisances to such a body as I have depicted, in whom is vested the right of dismissal of the medical officer of health, without ever giving reasons for their arbitrary treatment? A medical man, under the Scotch Poor Law, is simply a nonentity in the hands of his Board. So long as he can keep them sweet and cotton to them and their friends, charge them moderately according to their own tariff of medical charges, visit and associate with them, and be patronised by them, all is well; but should he be from home when the chairman sends for him to examine a visitor's toe, or to prescribe a remedy for an hysterical relative, then, alas! his tenure of office is short, and the factor or factotum of my lord gets up a hue and cry that the doctor has been very careless—and, in fact, has been guilty of not making himself a loved admirer of the local magnate and his numerous satellites. The said chairman or his deputy, the factor, imports his personal grievances into the business of the Parochial Board at their next meeting; the other members are duly informed by the factor that there is a general dissatisfaction among the ratepayers with the doctor, that he has been charging too high fees, and has been repeatedly sent for by the chairman and failed to attend, that, to sum up in short, "the proprietor wishes to get rid of him." The members present have all been duly buttonholed before the hour of meeting by the factor, and duly informed of the chief business of the day—viz., the intention to dismiss the doctor without a hearing. The members are all very much like the unfortunate medical men—very much under the control of the proprietor and his factor. They pocket their opinions, and their conscientious scruples as well; they keep silence. The factor dictates a minute for insertion in the minute-book of the Board, and the thing is done. The people, crofters, and tenants alike inwardly deplore the injustice done to their medical man, but dare not do more than give him their parting blessing.

This is no chimerical vapouring of a poor highland surgeon, but is a picture from life. The characters are well known to the inhabitants of the parishes of Sleat and Strath, Isle of Skye, and perhaps even in the Gairloch district of the West Highlands. My anxious desire is that the publication of such cases as this may stir up my fellow countrymen to get redress of their grievances.

I remain, Sir, yours very truly,
WALTER R. S. JEFFERISS, M.D., &c.

Burton-on-Trent, April 14th, 1883.

Mr. Lescher.—The book has passed out of our hands, but may be seen no doubt at the library of the Royal Medical and Chirurgical Society.

Mr. F. L. Nicholls.—The question is not raised specifically, but indirectly such a use of the title is prohibited.

"GALL-STONES."

To the Editor of THE LANCET.

SIR,—Many years ago I drew attention to the successful use in my hands of two or three drops of chloroform three or four times daily in any vehicle, and persevered in over one or two periods of attack.

I am, Sir, yours, &c.,
JOHN BARCLAY, M.D.

Leicester, April 12th, 1883.

THE BROWN FUND.

MR. FREDERICK WALLACE has received the following subscriptions, which he has forwarded to the Rev. E. E. Crake, Clifton House, Eastbourne, hon. sec. of the fund:—

Anonymous	.. ..	£25	0	0	E. Garraway, Esq.	.. £1	1	0
Dr. Bisset Hawkins	..	2	0	0	Dr. Gibbings	.. ..	1	1	0
Dr. Martin, Sydenham	..	1	1	0	Rev. D. J. Drakeford	..	1	1	0
C. E. Winckworth, Esq.	..	1	1	0	R. Barlow, Esq. ..	..	1	0	0

Mr. J. F. Milner.—Our correspondent is rather hard both on his club patient and on his professional brother. There is nothing unreasonable in a club patient with diphtheria wishing to see a second doctor, and we think our correspondent should have acquiesced cheerfully in the proposal.

Medicus.—Special works on feigned diseases are rare. Consult any standard work on Medical Jurisprudence. Taylor and Beck both deal fully with the subject.

Mr. Frank Coleman is referred to a general notice in another column.

G. B. B. has not enclosed his card.

TREATMENT OF HORDEOLUM.

To the Editor of THE LANCET.

SIR,—Having recently returned from Egypt, where, as most of your readers are aware, all kinds of eye affections are continually observed, I had some very favourable opportunities of experimenting upon these organs.

Perhaps the most troublesome and often noticed eye affections are what are known to us at home as hordeolum, or common stye. To residents in the East these annoying little inflammations give continual trouble, and generally resist the different treatments brought to bear upon them. Perhaps you will, with your usual courtesy, permit me to differ from some of my professional brethren, who persist in ordering the application of poultices, bathing with tepid water, &c. These no doubt do good in the end, but such applications have the great disadvantage of prolonging the career of these unsightly sores, and encourage the production of fresh ones. Now, what I have found, after many trials, to exert a well-marked influence in checking the growth of the stye is the local application of tincture of iodine. This is by far preferable to the nitrate of silver, which makes an unsightly mark, and often fails in its object. The early use of the iodine acts as a prompt abortive. To apply it the lids should be held apart by the thumb and index finger of the left hand (or a lid retractor, if such be at hand), while the iodine is painted over the inflamed papilla with a fine camel-hair pencil. The lids should not be allowed to come in contact until the part touched is dry. A few such applications in the twenty-four hours is sufficient, and I have never seen a single instance in which, after this treatment has been resorted to, the stye continued to develop itself.

As the stye is a common, troublesome, and unsightly sore, which, if allowed to progress, often runs a chronic course, to be followed in the end by a fresh crop, I have thought that the foregoing hints may be useful to some of your readers.—I am, Sir, yours, &c.,

London, April 9th, 1883. LOUIS FITZPATRICK, L.R.C.S., &c.

M.B. Lond.—Jevons' Elementary Logic; Mill's Logic (principal chapters); Bain's Mental and Moral Science; Bristowe's Medicine, supplemented by the chief works on the Diseases of the Different Organs.

Mr. John Henry Rutherford.—The correction is made in our Newcastle letter this week.

Mr. S. Standring is referred to any standard work of physiology.

Mr. Henry Smith, M.B.—In an early number.

"A RAPIDLY SUCCESSFUL TREATMENT OF ERYSIPELAS."

To the Editor of THE LANCET.

SIR,—Two days after reading Mr. Barwell's article on the above, in your issue of March 10th, I had an opportunity of applying the treatment in the following case, which, in response to his invitation, I hasten to make public.

J. C., age six years, was first seen on the morning of March 26th. More than a week previously the back of his right hand was burned at a stove. The mother dressed it, but the child went out in the frost and tore off the dressings. On the 24th he was taken sick, and when I was called in I found a sore about the size of a fourpenny bit, situated over the centre of the first metacarpal bone. From this a dusky erysipelatous blush spread about two-thirds up the back of the forearm and downwards over the fingers, involving the entire hand, accompanied by great swelling and fever, extreme restlessness and insomnia, and intense pain in the hand and forearm. The tongue was foul, and the temperature 101·4°; pulse 108.

I put a thick coating of white lead paint over the entire forearm, back and front, enveloped the limb in cotton-wool, and ordered one drachm of the tincture of perchloride of iron in divided doses throughout the day. Next morning I found the child sitting up. The temperature was 97°; pulse 84; the tongue clean. About half an hour after painting, the pain left him. He slept well, and on waking called for food. In fact, I was discharged from attendance, the child being convalescent, and complaining of nothing but itching of the part affected. I left orders not to disturb the dressing, and to continue the iron.—Yours truly,

N. O'D. PARKS, L.R.C.S.I., &c.

Ashton, Rhode Island, March 27th, 1883.

UNSATISFACTORY INQUESTS.

THE *Newry Telegraph* devotes a short article to the question, raised by a correspondent, "Are coroners' inquests a farce?" It must be admitted that some coroners conduct their "quest" in a way not calculated to excite respect. It was so in the case at Newry, where an inquest was held on a man who had died somewhat suddenly, but not so suddenly as not to have been seen by two medical men. Strange to say, neither of them was called, but another medical man, who had not seen the deceased before death, and had not been allowed to make a post-mortem, was summoned. This is really a *reductio ad absurdum*, and it is scarcely surprising that one of the jury, by suggestion, should have rebuked the coroner.

CASE OF SNAKE BITE AND RECOVERY.

To the Editor of THE LANCET.

SIR,—On March 6th, about 12.30 P.M., a young man (a half caste) walked to the surgery, having been bitten by a cobra ten minutes previously. He was by his house at the time, and immediately rubbed in some salt. The wound was just over the styloid process of the left ulna. He complained of great pain and tenderness at the spot, with a pain up the arm, bend of the elbow, armpit, side of neck and head. There was no bleeding. He was shaking with pain, but pulse good; temperature 97°.

Treatment: A bandage applied firmly above the wound; incision over the bite; the hand placed in a warm bath; one ounce of brandy every ten minutes for three doses; the pulse not being so good, one drachm of compound spirits of ammonia in the first and last dose; two hypodermic injections of morphia of five minims each at a quarter of an hour's interval, and two minims of strong solution of ammonia with six minims of water hypodermically; put on a couch, and covered with blankets. The patient got to sleep a little after 1 P.M., and was not disturbed until 3.30 P.M., when he got up to pass water. Shortly after he walked with assistance to his house close by. The blood that flowed from an incision a quarter of an inch long was quite different from an ordinary non-poisoned wound. It was of the consistence of treacle, and coagulated almost as soon as it flowed—in fact, not a drachm coming altogether. There also seemed to be two sorts of blood—blood of the ordinary colour, and some decidedly lighter. Under the microscope it differed from ordinary blood in that it did not form rouleaux, and there was the appearance of bud-like projections from the cells, about one-fifth of the whole.

There is nothing in books but the most vague directions that ammonia is good for stings and bites. Here Croft's tincture is considered the only reliable treatment. What that is made of is unknown to us, but we should be pleased to learn the best method for the treatment of dangerous bites through your correspondent columns.

We are, Sir, yours, &c.,
CHAS. WM. BROWNE, M.R.C.S. Eng.
SYDNEY SMYTH, M.R.C.S. Eng.

Rouxville, Orange Free State, South Africa,
March 8th, 1883.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

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LETTERS, *each with enclosure*, are also acknowledged from—Mrs. Codd, Worthing; Mr. Towers, Stockport; Mr. Sutherland, Glasgow; Dr. Norton, Bournemouth; Mr. Coombs, Bridgwater; Messrs. Cox Brothers, Williton; Mr. Hodgson, London; Mr. Veitch, Stockport; Mr. King, Southampton; Mr. Dunn, Marske; Messrs. Slinger and Son, York; Mr. M'Kinnon, Edinburgh; Mr. Burleigh, London; Mr. Henly, Newtown; Messrs. Finlay and Co., Liverpool; Mr. Thorn, Leamington; Mr. Stenhouse, Glasgow; Mr. Forbes, Drumlithie; Mr. Maw, Bradford; Messrs. Harrison and Bruss, Elgin; Mr. Wright; Mr. Williams, Oxford; Dr. Stockwell, Benton; Mrs. Veale, Barrow-in-Furness; Messrs. Jones and Son, Llanfilyn; Mr. Weller, Bridgwater; Mr. Moriarty, Derwent; Mr. White, Bayswater; Mr. M'Gill, Littleborough; Dr. Robinson, Hull; Mr. Smart, Thetford; Mr. Scott, Manchester; Mr. Clasher, New York; Mr. Jones, Swindon; Dr. Jones, Camberwell; Dr. Hodgson, Leeds; Mr. Gann, Hayling; Dr. Goodson, Stratford; Mr. Crew, Lancaster; Mr. Brundell, Norwich; Dr. Watson, E. Peckham; Mr. Burleigh; B., Norton Folgate; Chinchona; Alpha; E. C., Kensington; Medicus, Eccles; R. B. S., Bedford; Registrar, Bath; Tonsor; X. Y. Z.; A. C.; Theta; Proprietor, Brighton; L. M., Richmond; K. E.; M.R.C.S., Alfreton; Gutta; L. M., Camden-town; Solicitor; W. W., Nottingham; Sigma, Edinburgh; E. T., Fulham; Maller, London; Alpha, Bristol; T. J. C., Oldham; G. M., Wingham; Zeta, Leeds; X., Bristol; Principal, Seaford; H. T. C., Westgate-on-Sea; J. M., Finsbury; &c., &c.

The Young Scientist, Westminster and Lambeth Gazette, Glasgow Herald, West London Advertiser, Kentish Gazette, Retford and Gainsborough Times, Bury Free Press, &c., have been received.

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